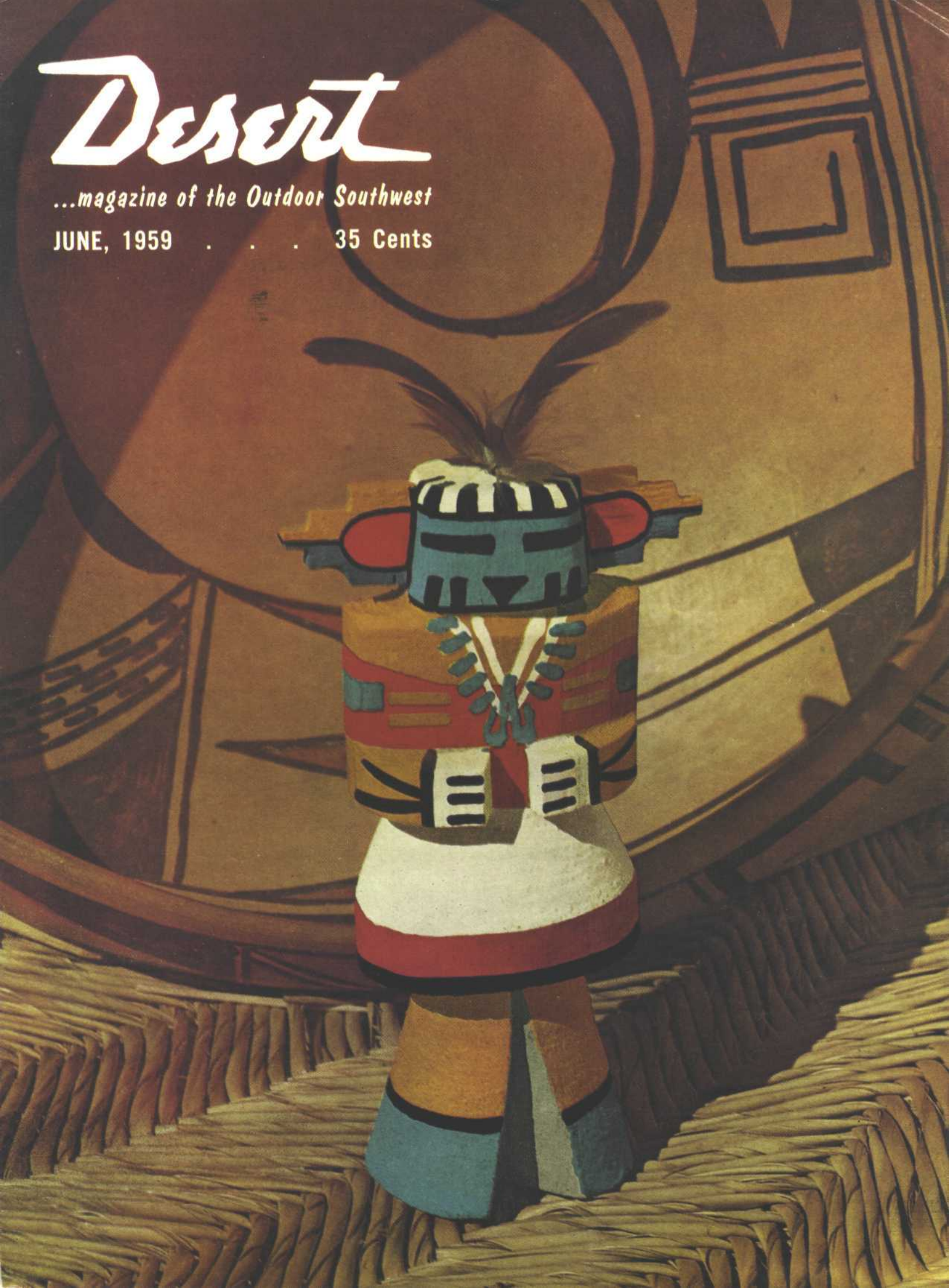


Desert

...magazine of the Outdoor Southwest

JUNE, 1959 . . . 35 Cents





RAMON'S WORLD

By MAUDE RUBIN

Before the open pine-wood door,
small Ramon plays in sand . . .
Walks to his blanket-bed at night, led
by his father's hand.

His father, planting yellow maize be-
hind his placid burro,
Sows faith in summer's coming
warmth, deep in each crooked
furrow.

His mother, planting pinto beans be-
hind the 'dobe house,
Sows hope for every family need,
crumbs for the winter mouse.

So Ramon's days are warm and
bright, sun-wrapped in desert air—
His moon-lit nights are clear and
white; his pillow is a prayer.

POEM
of the
MONTH

Desert

...magazine of the Outdoor Southwest

Volume 22

JUNE, 1959

Number 6

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By HARRY VROMAN

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ABOUT THE COVER . . .

... "Katchina Doll and Hopi Pottery" was photographed by Harry Vroman at a gift shop in Cottonwood, Arizona. Vroman, a long-time *Desert* contributor, is a resident of Prescott and Phoenix. To the Hopi, Katchina dolls are symbols of the supernatural Katchina beings who directly influence the lives of the devout tribesmen.

Publisher's Notes . . .

This month's *Desert Magazine* might be called our "Wild Horse" issue. Starting on page 4 is the feature article of the month, a story about a crusading Nevadan, "Wild Horse Annie." Our back cover shows a wild mustang caught in a sunset glow. And we even have a short verse dedicated to the wild horse.

You'll be reading more and more, in the coming months, on the place of the wild horse in the not-so-wild-West. Faced with extermination, the feral horses of the Southwest have become a political issue in several states. That's probably the last thing a wild horse wants to be—almost as bad as ending up in a can of dog food, which is the fate of many of the West's nomad horses today.

This month marks the advent of a camera column, with text and photos by Bob Riddell of Tucson. Riddell has contributed to *Desert Magazine* in the past. We have asked him to point his camera tips toward the average photographer, rather than the expert.

And news for the photographer, who counts himself an expert, is that our Photo-of-the-Month winner will hereafter receive \$15 for the selected desert-topic photo. Amateurs and professionals alike are invited to compete for the honor and the honorarium that goes to the winning photographer.

While we are on the subject of photography, we believe you will enjoy as much as we did while selecting it, the front cover four-color picture of the katchina doll. It's the first time *Desert Magazine* has featured a doll on the cover.

Desert Magazine is proud to call attention to its membership in the Audit Bureau of Circulations. The Bureau serves as a verifying agency for circulation figures. ABC is a non-profit organization composed of magazine and newspaper publishers, advertising agencies and business firms.

CHARLES E. SHELTON
Publisher

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CHARLES E. SHELTON, Publisher
EUGENE L. CONROTTO, Editor
RANDALL HENDERSON, Advisory Editor
EVONNE RIDDELL, Circulation Manager



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Wild Horse Annie fights



By BEVERLY WALTER

VELMA JOHNSTON, a slim, vital, determined woman, stood on the hood of her station wagon with camera in hand. She was there to photograph a band of captive wild horses illegally corralled in a camouflaged pen—trapped for the rendering works of a pet food company.

In the front seat sat Velma's husband, Charles, a .38 revolver on his lap.

Velma gazed toward the crude corral a long time before she snapped her pictures. The mustangs were milling around in the dry dust, hysterical with fear. Their hoofs and mouths were bleeding from the abuse received from their capturers. The horses emitted strange tortured cries, but the two rough men in charge had but one thing on their minds: transporting the animals to the slaughter house. Their contract stated that the animals "should be breathing" on arrival.

Suddenly the wranglers spotted Velma and her camera. They rushed for their truck and came roaring down the dirt road toward the Johnstons. Charles leveled his .38 at the truck driver as Velma scrambled for safety. At the last second, the truck veered and took to the open road.

This is not a scene out of a Wild West pocket book, nor did it occur when the West was a youngster. This was "Wild Horse Annie" in action, and the incident, typical in her career, is less than a year old. She had tracked the horse thieves to a desert canyon seven miles from the Johnstons' Double Lazy Heart Ranch near Wadsworth, Nevada.

Velma notified law enforcement officers of the incident, and next day they released 400 wild horses, part of a huge roundup undertaken in western Nevada without permission of the Bureau of Land Management or county officials.

With endless courage and endurance, Velma "Wild Horse Annie" Johnston has fought the wild mustangs' battle for the past 10 years. But this crusade had its beginning in 1884 when a humble covered wagon was crossing a desolate stretch of Nevada. Mary Bronn lay ill and weak in the back of the wagon, but her concern was for the wan child at her side.

"Our baby will die unless he gets some milk," she said to her husband.

Hobbled nearby was a wild mare, her colt cavorting in the background. The man recalled that the young horse was the "fiercest, fightingest, bravest little critter" he had ever seen. Grabbing a pail from the wagon, he milked the mare. The woman fed the milk to their son. Thus was the life of Joe A. Bronn, Velma's father, saved.

"You see," says Velma, "it's in my blood!" She got into the fight a decade ago following a ride from her ranch to Reno. At one point on the highway she was slowed by a truck jammed with bleeding and exhausted mustangs. The animals, frothing for water, were able to stand only because their bodies were packed so tightly.

It was a nightmarish scene, one that Annie has never forgotten. "Where are those animals from?" she asked

WILD HORSE

By James Rhodes

Wild horse, racing across the plain,
Sand in your hoofs and wind in your mane.
Never look back,
Never stop going.
Racing to the meadow
Where the greener grass is growing.
The mighty kingdom's calling,
Night will soon be falling;
Beat the sun,
Wild horse, run.

to save the mustang . . .

herself. "Where are they going?" Where from? Once back at her office she made hasty inquiries and received the answer: "They are from the clean wide spaces of the wind; from shaded canyons, sunset rims and craggy bluffs; from herds that run free and unfettered."

Annie dug deeper. One disquieting fact led to another. At one time, an expert estimated, 70,000 wild horses ran the sparse ranges of Nevada. By 1949 there were less than 10,000. (Today it is closer to 6000.)

After the war the pet food suppliers began using a new and much more effective way of rounding up the mustangs. Airplanes hazed scattered bands out of the rocky canyons and ridges into open country. There the ruthless quest continued. Trucks, boarded by men expert with lassoes, chased the mustangs to the point of exhaustion. Some were run until only bloody stumps of hoofs were left. Then the short rope was thrown around the horses' necks. Tied to the other end of these lines were heavy truck tires which were kicked off of the truck bed when a horse was snagged.

Behind the capture truck came a stock truck into which the lassoed horses were prodded, dragged or beaten. Then came the long ride to the slaughter house.

In the early years of her crusade, Velma watched the tactics of the wild horse robbers grow crueler and bolder. They polluted or roped off waterholes, forcing the wandering herds to seek water at places where the hunters lay in waiting. Weak colts were left to starve; horses with broken legs were abandoned.

As an outgrowth of this business there developed a "sport." Rifle-equipped hunters took to the air, and wild horses were shot from airplanes for nothing more than the sheer love of the killer to kill. If an animal fell near a road, the hunter sometimes returned to cut off the ears as a conquest trophy.

"It was terrible," Velma recalls. "I had to let people know what was going on."

She swore she would spend a lifetime, if necessary, to save the mustangs. But Velma knew she would need more than sentimentality on her side to win the fight. She needed facts to support her arguments, for her opposition came from quarters other than the outlaw horse hunters.

Sheepmen and cattlemen in the state, claiming that the uninhibited movement of wild horses was injurious to grazing land, long had demanded that the mustangs be rounded up and disposed of. Supporting this stand were the com-

mercial rendering works officials. They wanted legislation that would give them the right to capture and transport the animals.

But, Velma was gathering strength. The horsemen's associations were on her side. So were Edward "Tex" Gladding, postmaster of Virginia City, and Jack Murray, a Comstock businessman. Gladding and Murray had bred and raised saddle horses for many years. They and other old-time stockmen were of the opinion that wild horses only grazed land that would not support cattle. The mustangs, they said, helped reseed the open ranges.

Velma learned from others that mustangs saved cattle on the winter range by breaking ice with their hoofs at the waterholes. Wild horses also pawed through the snow to bare grazing ground that cattle eventually used.

Velma's first public appearance in behalf of the mustangs was in June, 1952. The Storey County Board of Commissioners met to consider the mounting mustang slaughter problem. Out of that fiery meeting came Velma's first victory. The commissioners banned the pursuit of wild horses by

plane or other motorized vehicles.

It was at this meeting that Velma was dubbed, "Wild Horse Annie." It was given in derision, but today she

Nevada Congressman Baring Would Outlaw Mechanized Capture of Horses

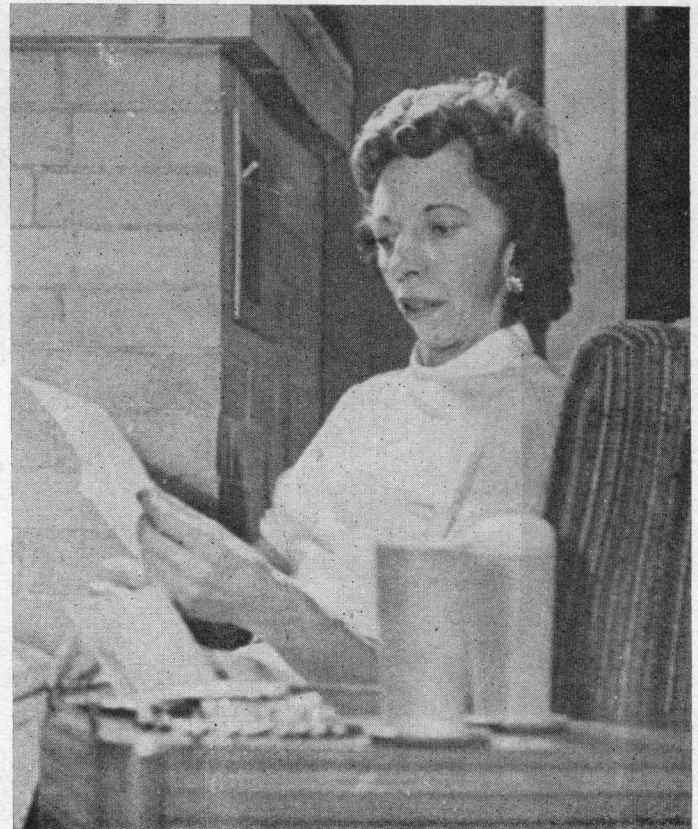
Congressman Walter S. Baring of Nevada is sponsoring legislation (H.R. 2725) which prohibits the capture of wild horses and burros on public lands through the use of airplanes, trucks and other mechanical devices, and further prohibits anyone from contaminating the animals' watering holes. This is what he had to say about the West's wild horses in a recent letter to *Desert Magazine*:

"The mustang has played an important part in the early development of the west and the tradition of their presence is comparable to the stagecoach and six-shooter.

"It may be that today's wild horses are a degenerate species. Because of the hardships they have endured in recent years, they have been forced higher in the hills where food and water are not available.

"The important thing, however, is that whatever they may be today, there is no justification for torturing them to furnish food for other animals which have been domesticated."

Baring pointed out that dog and cat food canneries can afford to pay but very little for mustang carcasses, and as a consequence hunters must herd the horses by airplane and trucks in order to net a profit.



PEOPLE FROM THE FAR CORNERS OF THE WORLD HAVE WRITTEN TO THELMA "WILD HORSE ANNIE" JOHNSTON SUPPORTING HER EFFORTS TO PROTECT WILD HORSES.

bears that nickname with honor.

Despite the Storey County breakthrough, the wild horse slaughter continued. To be effective, Velma knew the measure of protection afforded by the Storey law had to encompass the entire state.

With characteristic persistence, Velma carried the fight to the capitol at Carson City. In March, 1955, State Senator Slattery's bill for the creation of a state-wide ban on the killing of wild horses was signed into law by the governor. However the new statute did not apply to the eight acres in 10 that the federal government owns in Nevada, and the pace of the slaughter did not abate.

Range War

The wild horse controversy took on the aspects of an old-time range war. It reached a climax in February, 1957, when the *Sacramento Bee* published a series of widely-quoted front page features on the struggle to save the mustang. "It is time 'Wild Horse Annie' came to light," said the paper. Thousands of letters poured over the Sierra Nevadas into Nevada.

But after awhile the public outcry against the slaughter tapered off, and the roundups continued.

Fearing federal legislation would come too late to save the horses from extinction, Velma tried a new approach. On her own initiative, she

posted spotters in strategic locations in the desert canyons to notify the sheriff's deputies at the first sign of illegal maneuvering. Many big brawny Nevadans volunteered for service in "Annie's Patrol."

The Word Spreads

Meanwhile, Velma's crusade was receiving its first taste of national publicity. Newspapers and magazines carried feature articles on her work. She received letters from the far corners of the world in praise of her efforts. A missionary in the Belgian Congo sent a poem on the wild horse — a memory of his childhood . . . from Georgia a judge asked how he could help . . . a nun in a Wisconsin convent sent her prayers . . . a Detroit cat fancier wanted petitions to circulate at cat shows—no wild mustang meat for his cats! . . . a 7th grade class in New Mexico organized a class project known as, "Save the Mustangs" . . . from Cyprus came encouragement from a sergeant in the Black Watch regiment . . . the Massachusetts SPCA made mustang preservation their legislative project . . . a Sioux chief wanted to lead a band of warriors in defense of the wild horses so cherished by his race. Characteristically, Velma answered each letter personally.

In April of last year a major victory in Velma's long fight was almost achieved. Nevada Congressman Wal-

ter S. Baring (see insert) introduced a bill to prohibit the hunting of mustangs by airplane or motorized vehicles on any public land in the United States. However Congress adjourned before action could be taken.

In January of this year Baring re-introduced his bill (H.R. 2725). It is popularly known as the "Save the Mustangs" bill. At this writing (late April) there has been no action, but Velma is encouraged. If it doesn't come this year, perhaps next.

Meanwhile she goes on with her fact gathering, correspondence and publicity work. Virginia Gillas, who operates a secretarial service in Miami Beach, Florida, is one of Velma's most loyal and active helpers. Together they have prepared, mimeographed and mailed hundreds of pieces of literature to further the campaign.

Secretary

"Wild Horse Annie," in her daily routine, is the soft-spoken and charming secretary to a pioneer Reno business firm. She was born in that city in 1912. The Johnstons have been married 22 years. They have no children, but each summer Velma takes a dozen of her friends' children for a stay at Double Lazy Heart. She and her husband teach them how to ride and how to get along in the desert outdoors.—END

DESERT PRIMER SUMMER SURVIVAL

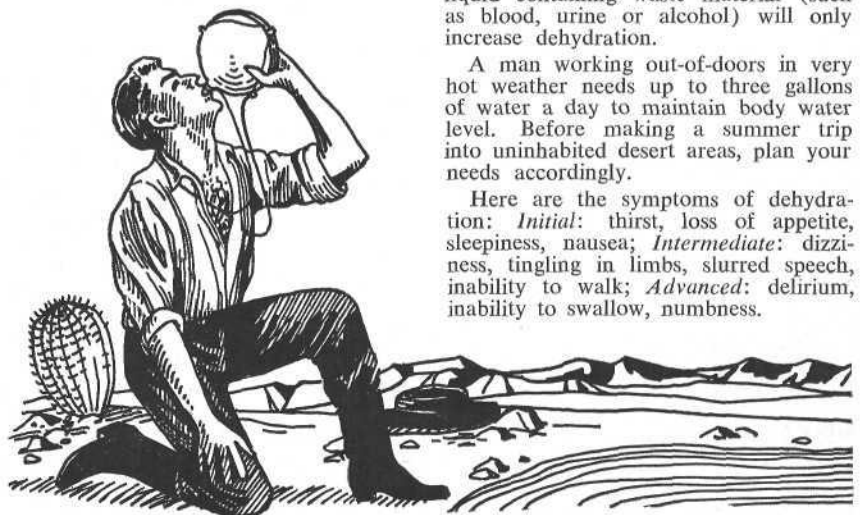
... the need for water ...

Respect the desert—do not fear it. If you are prepared, the desert, even in summer, is far safer than dodging traffic on a freeway. Bring plenty of water, know the area you are visiting, have adequate maps and a compass, and tell someone where you are going and when you expect to return.

But, let's look at the worst: your car has broken down in rough unfamiliar country; you failed to leave word, and no one knows where you are (and therefore your chances of being rescued by a search party are nil); maximum temperatures hover near 120 degrees in the shade!

Now let's assume that you wisely took along an adequate water supply (without water you could expect to survive two days, perhaps three in hot weather; having a supply of three quarts or less per day may not appreciably increase your expected survival time). Your most important need is to prevent dehydration, and you can do this two ways: by conserving your body water (resting in the shade by day and walking by night, keeping fully clothed), and by drinking enough water to replace

that which is lost through perspiration. Drink sensibly. Science has not yet discovered a person who can adapt to a sub-standard supply of water. Drink when you are thirsty. If you are low on water, try to find more.



Stick to the trails when hiking—preferably your own car tracks. Trails usually lead to water and safety. By striking out cross-country you run the risk of wandering in circles or coming across impassable terrain. Any country a vehicle can travel, you can walk.

Most likely water sources on the desert are at the base of cliffs or at the head of washes in foothills. Damp sand in such washes is a good place to scoop out a deep "hand well." Many times water will settle in these holes. Also look for standing water in rock cavities.

There is no substitute for water. A liquid containing waste material (such as blood, urine or alcohol) will only increase dehydration.

A man working out-of-doors in very hot weather needs up to three gallons of water a day to maintain body water level. Before making a summer trip into uninhabited desert areas, plan your needs accordingly.

Here are the symptoms of dehydration: *Initial:* thirst, loss of appetite, sleepiness, nausea; *Intermediate:* dizziness, tingling in limbs, slurred speech, inability to walk; *Advanced:* delirium, inability to swallow, numbness.

THE WILD HORSE TODAY

IN SPITE of barbed wire, grazing permits, motorized ranch operations, airplanes, expanded military reservations, and the increasing pressure of civilization in general, there still are 15,000 to 30,000 wild horses inhabiting the West today, plus another 2000 to 4000 in western Canada. More properly "feral" than "wild," because they are descendants of domesticated stock that reverted to the wild, these animals are scattered over parts of 13 states, but mostly in the desert and semi-desert regions of the Southwest.

Nevada contains the largest number, with several thousand inhabiting the rocky ranges and basins of the northern and central parts of the state and a few hundred in the southern part. California's wild horses are mostly in the eastern portions of Modoc, Lassen, Mono and Inyo counties, which abut Nevada. Arizona has only a few remnant herds dispersed widely, though the principal concentration is in the Fort Apache Indian Reservation and adjacent parts of the Mogollon Rim country. New Mexico is second only to Nevada as a stronghold for wild horses, with several thousand in the various Pueblo reservations of the upper Rio Grande Valley, the Mescalero

By TOM McKNIGHT*

Apache Reservation northeast of Alamogordo, and the Tularosa Basin west of Alamogordo.

Colorado's wild horses mostly are found in the southwestern corner of the state (in and around the Southern Ute Indian Reservation) and the northwestern corner (largely between the Yampa and Little Snake rivers). In Utah the horses are widely dispersed, but are most numerous in the semi-arid basins and ranges of western Utah, particularly in Tooele and Juab counties.

These animals characteristically run in small herds of from five to 15 individuals, roaming as widely as the press of civilization and the availability of water and forage will permit. Generally they occupy remote back country, which varies from rugged mountain ranges and pinyon-juniper rimrock to sagebrush-covered hills and bajadas.

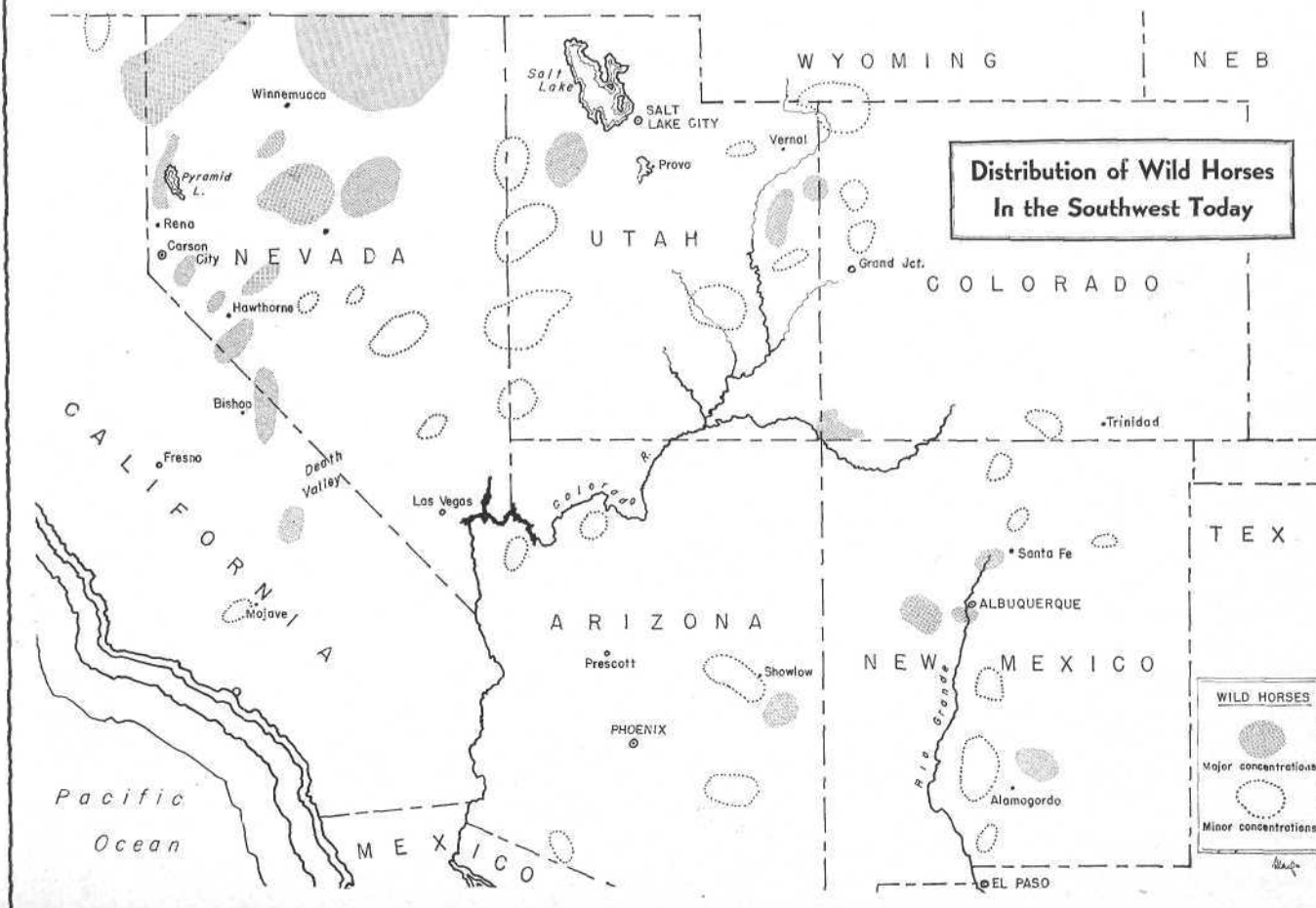
In physical appearance today's wild horses bear only limited resemblance to the famed mustang of yore. Presumably as a result of scanty grazing and inbreeding, they tend to be runty, big-headed and coarse, though they have agility and stamina. Occasional individuals are handsome and well-built, but these are the ex-

ceptions. Indeed, their most common appellation in the West is "broomtail."

Unlike the wild burro, the wild horse does not significantly interfere with the activities of other fauna. There is some competition for forage with deer and antelope, and occasional examples of bothersome waterhole pollution, but in general these instances are limited in scope and occurrence.

If left alone by man, the wild horse would probably multiply with great rapidity. It is virtually exempt from predation and is rarely molested by parasites and diseases. However, man, chiefly in the person of ranchers who disapprove of sharing their forage and water with unowned and economically unprofitable horses, has exerted a strong measure of control, reducing the wild herds from several hundred thousand a decade and a half ago to only a fraction of that number today. Indications are that this total will continue to decrease, albeit slowly, until only a few thousand are left in widely scattered localities. I expect that this remnant will be extant indefinitely.—End

*McKnight is assistant professor of geography at the University of California at Los Angeles. He recently completed a year-and-a-half study of feral horses in the United States and Canada.



Red Mountain's "Official Greeter"

By MARGARET STOVALL

EVIDENCE THAT this slumbering Mojave Desert town was once named "Osdick" lay half-hidden under a creosote bush in Pete Osdick's front yard. It was an old diamond-shaped Auto Club sign, rusted and bullet-hole punctured, with "Osdick" printed across the top.

Pete Osdick of Red Mountain, California, came out to greet us. As "official greeter" for the Randsburg-Johannesburg - Red Mountain mining area, he has had much experience at being the genial host—and with Pete it's a job he sincerely enjoys, not something he does as a favor to the community. Pete looks the part, too: neatly trimmed beard, eyes twinkling, gold watch chain dangling, soft-spoken, dignified.

Osdick the Greeter

He spoke to us of mining and minerals and men, as he led us around his memento - and - rock - filled patio. Osdick pointed to a photograph of himself, "the greeter," with former Governor Goodwin Knight, and he talked about the old-time miners reunion in Randsburg last September. He was, he said, 83 years old, and he lately had mastered the technique of conserving his strength. "You have to learn how to slow up at my age," he said.

When he stood up, he was quite erect. "Maybe you'd like to see the stamp mill?" he invited.

The Osdick mill, Max Hess had told us earlier that morning at the Desert Museum at Randsburg, is the finest complete works of its kind in the area. Max has been in charge of the museum, now run by Kern County, for the past six years, but he still is a miner at heart. His knowledge of Pete Osdick goes back to the days of Osdick railroad siding; to World War I and the influenza epidemic; and to the great silver strike by Hamp Williams, which became the Kelley Mine.

As one of the men involved in the silver venture, Max recalled that \$22,000,000 worth of metal was stamped

through the Osdick Mill, and shipped from Osdick Siding. "I guess Pete kept more people awake around here with his mill running night and day than you'd ever guess lived here. Lots of folks must have complained, but you just hardly ever saw Pete get mad—except maybe when they changed the name of the town."

Pete walked to the base of his old stamp mill. He looked over the maze of machinery and lumber for a long minute before he turned to us and smiled. "As long as it was going tip top, I could keep 'em awake in Randsburg all night," he said. "These are 1000 pound stamps and they had to pound it out 96 times a minute."

Pete slowly came away from the mill. "This was \$15,000 worth of machinery in its day," he said. "Mining is so low now you shouldn't expect people to understand. Would you like to see the hundred - thousand - dollar mine that isn't worth a cent?"

We drove down the mountain into a big area rich with greasewood and red-stained earth. Narrow dirt roads led to a silent tungsten mine.

A Lost \$100,000

Pete Osdick pointed to a weather-battered office cabin near the workings. "Right there," he said, "is where they waved a check for \$100,000 in my face and I turned it down. Six weeks later the war was over and the boys were marching home. And I'm still here, hanging onto my mine and smoking my pipe.

"Mining is a matter of supply and demand, as well as luck," he went on. "I've seen the time when a talcum deposit would have made a man rich. For awhile, it was tungsten's turn. A two-pound chunk was worth \$63—I used to make quite an impression giving such a piece to an executive for a paperweight. Now you couldn't get a meal for that same chunk of ore."

Tungsten has made the full circle. "We used to call it white spar," Pete said with a chuckle. "We tossed it at our jackasses. If the boys still used jackasses today they'd be doing the same thing."

PETE OSDICK AT STAMP MILL THAT
PROCESSED \$22 MILLION IN SILVER.

Pete Osdick has lived most of his days in Red Mountain, a Mojave Desert mining camp where, in its younger years, "... every night was Saturday night, and Saturday night was the Fourth of July."

Back at Osdick's homestead, we examined his silver mine.

The shaft is sunk 250 feet on an angle. Because silver, like most other metals, is hardly worth mining these days, Pete has taken a little boy's delight in leaving two boards open to show a glittering outcrop of fool's gold beneath—"like a Tiffany showcase."

When Pete made his next suggestion, it was as though he had been weighing it in his mind for a long while.

"I think I have the tail of the Yellow Aster in a gold claim back in the hills," he said. "It's a pretty drive through the canyons—if you'd like to go."

He spoke in an almost reverent tone. The man standing before us was no longer Pete Osdick the official greeter; or Pete Osdick, father of Red Mountain; or even Pete Osdick, the tungsten and silver miner who had spent his money "like it would go on forever."

Scoff if you will—but there is something about gold. It's a living thing. There is a purity about it. Pete was not immune to gold fever, and he showed it.

Pete's claims are a thousand feet above the town on the mountainside opposite the Yellow Aster, greatest producer in the district—\$40,000,000 in gold, \$70,000,000 in tungsten. As we climbed, the desert below—laced by ribbons of concrete and wandering dirt trails—became a panorama sweeping to the distant mountains.

New Mining Methods

We passed a young man gouging out a claim with a roaring bulldozer. "That's a lot faster than a pick and shovel," Pete commented, "but you don't get the feel of the earth mining with a machine. You can't study the formations. Following a vein is the most important thing a miner ever does. We used to say: 'when you find it, stay on it even if it takes you to China.'"

Still climbing, we came to an abrupt turn which led through a narrow defile in the rocks.

"Dynamited it out myself," Pete commented. "Carried away the rubble in a wheelbarrow."

Another turn and there before us

were two great yawning holes in the side of the mountain guarded by ancient Joshua trees silhouetted against the blue sky.

"It's a big low-grade proposition," Pete explained. He spoke at length of the mine, his enthusiasm mounting.

"Gosh," he said at last, "I talk like I don't know about the price of gold not being enough to pay miners' wages. Sometimes when I get up here I do forget."

At 83-years-of-age a man begins running out of "tomorrows."

Always a Tomorrow

"What kind of a man is Pete Osdick? I'll tell you about Pete," Max Hess had said. "Pete's a miner—a man who made a lot of strikes and a lot of money. And he spent it. There was always tomorrow, he thought."

"In 1917-18 the Yellow Aster was going full blast with 250 men working three shifts a day.

"When the flu epidemic struck, the miners in those little cabins started dying like flies. There was no priest and no minister up here, but Pete saw

to it that each one of these men had a decent burial. Not one of us around here then has ever forgotten that," Max said.

Della Gerbracht, a miner whom the old-timers call the "Queen of the El Pasos," said of Pete: "He's the kind of man who just goes on smiling and making more friends."

Max told us how "Osdick" lost out as the name for this town:

Name Changes

"There was an old fellow—Daddy Shaw, we called him—who had a little house down there near Pete's Siding, and he kind of took care of things around. So he put up a sign: 'Always In.' Another fellow built a place not far distant and he was always out looking for something, so he put up a sign; 'Seldom In.' First thing you know, there was a little town there and people were calling it 'In-City.' Pete didn't like this at all, and he got the postoffice to put through the name 'Osdick.' But the In-City people put a great big sign across the road. Later on, the big mine interests stepped in. They called the place 'Red Mountain,' and the postoffice followed suit."

The school district is called Osdick, as is the voting precinct. The unpaved road to Pete's home is "Osdick Drive."

Some maps still show Osdick Siding, but there are no longer any trains.—END



WEATHERED TIMBERS OF OSDICK MILL ARE BECOMING A TOURIST ATTRACTION.

the *Franciscans'* SALINE MISSIONS



MISSION SAN GREGORIO DE ABO.

The task of converting the Indians in the Manzano Mountains of central New Mexico was heaven-sent work for the pious padres. One of the first steps, as usual, would be the building of great churches.

By JAMES W. ABARR

MY FIRST glimpse of the old Spanish mission came in the early morning as I stood on the brow of a low hill on the eastern slope of the Manzano Mountains in central New Mexico. In the distance appeared the sturdy 40-foot walls of Quarai, their brown hues fired to a dull red by the rising sun. It takes little romantic inclination on the part of the observer for the sight of these fortress-like walls to stir the mind with wonder at the amazing accomplishments of the dedicated and fearless padres.

Quarai's mission was the product of an era that dawned over 400 years ago. The brown-robed brothers of

the Order of Friars Minor came to New Mexico in the van of bold conquistadores who with pike and broadsword carved the rudiments of civilization from a primitive land. But the humble fathers served more than the cause of empire. They were following edicts of the founder of their order, the gentle Saint Francis of Assisi, who directed they set out to "lift up the hearts of men and move them to spiritual gladness."

Through the valley of the Rio Grande the Franciscans carried Christian teachings to a Stone Age people. The influence of these white strangers spread east and west of the life-giving river and its chain of missions.

Quarai was one of those settlements off of the Rio Grande Christianized by the Spaniards. It is 35 miles east of the river on the far slope of the Manzano Range. The villages in the Quarai district had two names: the Saline Pueblos, a reference to the important salt marshes nearby; and "The Seven Cities that Died of Fear," because they were abandoned in the late 17th Century after repeated Apache raids and a long period of drouth. The Saline Pueblos probably had a combined population of 10,000 souls at one time—a rich prize for the Kingdom of Heaven, the zealous Franciscans must have felt.

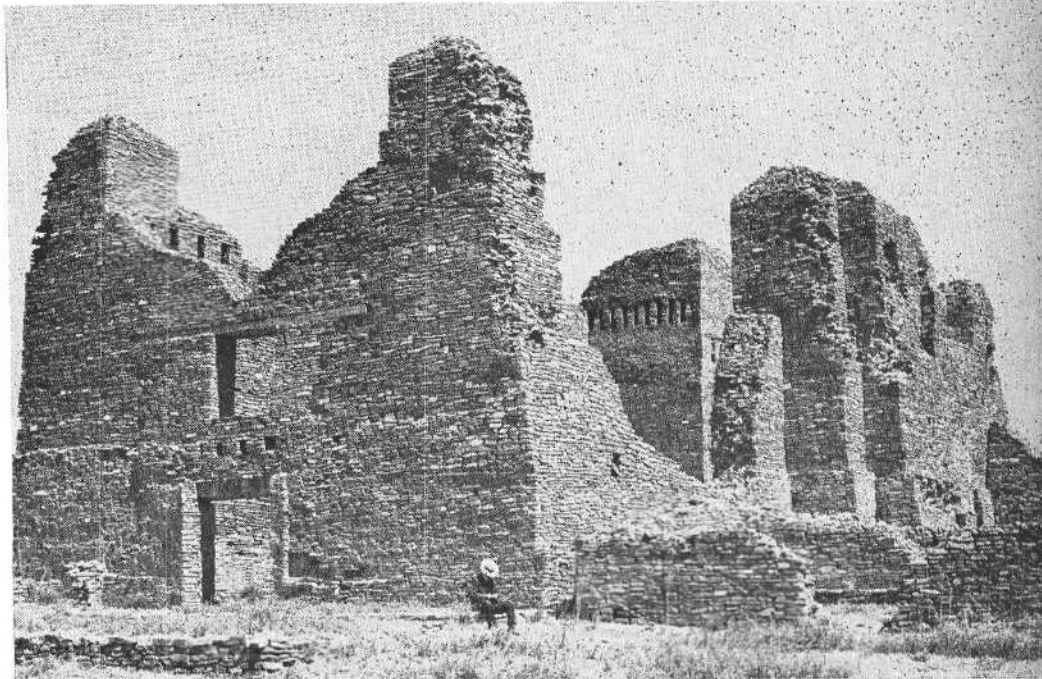
New Mexico Route 10 passes through six of the seven Saline villages (see map and accompanying insert). Some of the villages are inhabited today — charming Spanish-American rural communities in a setting of pine-clad slopes and ancient ruins.

The landscape at Quarai is worthy of an artist's canvas. To the east the grassy valley sweeps out to meet the

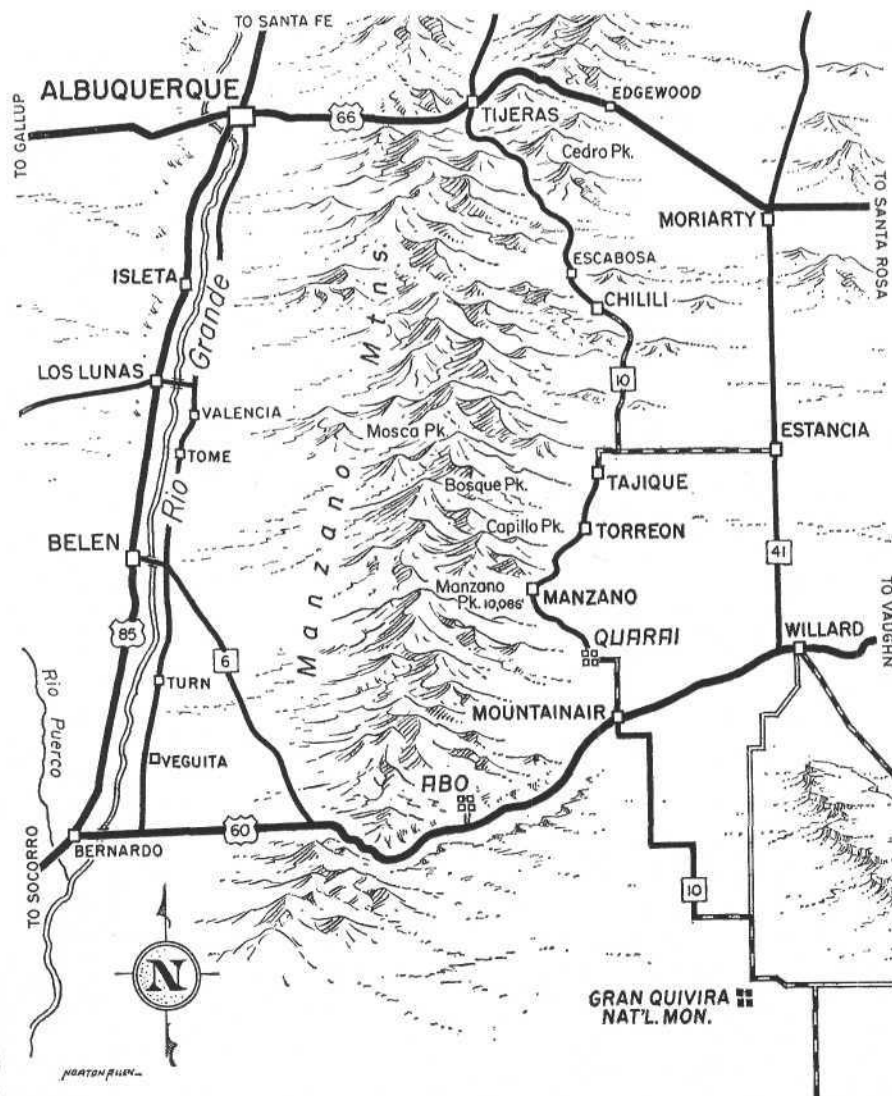
vast Llano Estacado — the Staked Plains of eastern New Mexico. This sprawling expanse, reaching beyond the horizon, was once the domain of great buffalo herds and the warlike Comanche. Westward, the rugged peaks of the southern Manzanos form a spectacular backdrop.

I walked past the humps of earth-covered pueblo ruins situated on many of the low rolling hills in the mission area. Although little excavation of the Indian village has been done, it is obvious from the debris that Quarai was a community of fair size. Dominating the village are the decaying but still impressive ruins of the mission. This was Mission *La Purisima Concepcion* (Immaculate Conception), built about 1629. Its architect was Fray Estevan de Perea, probably the

RUINS OF MISSION LA PURISIMA CONCEPCION, BUILT OVER 300 YEARS AGO AT QUARAI VILLAGE.



THE SEVEN CITIES THAT DIED OF FEAR...



CHILILI is at 6000 feet altitude. When first visited by Spaniards in 1581, the pueblo was south of the present town, but little evidence of its existence remains. The mission in this settlement was dedicated to Nuestra Senora de Navidad. The inhabitants were forced from the village in the 1670s by the Apaches. Settlers from the Rio Grande Valley returned in the 1700s. Today about 500 of their descendants live in sleepy Chilili.

TAJIQUE, pronounced ta-HEE-ke, was the home of 500 tribesmen before the Apache raids. Today about that many Spanish farmers and their families live here. It is a typical Spanish-American rural community.

TORREON is about 1000 feet higher than Chilili. Ruins of the former Saline Pueblo are visible here.

MANZANO provides an old world setting for the visitor. Situated at the base of 10,086-foot Manzano Peak, the village and mountain range take their name from an old apple orchard here (manzana is Spanish for apple). El Ojo del Gigante is the name given to a large spring which flows out of the mountains to form a convenient reservoir for the townspeople.

QUARAI'S mission, featured in the accompanying story, was the largest of the Seven Cities.

ABO also is described in the accompanying story.

GRAN QUIVIRA is a National Monument. During its heyday, 1500 tribesmen lived here. The Spaniards built two churches, now in ruins, at this large village. It is said that during the Pueblo Uprising, 68 of Gran Quivira's 70 priests and monks were massacred. Growing out of this incident is the legend that the Spaniards, warned of the coming trouble, buried the treasures of the church—including the bells and sacred vessels. Treasure seekers have dug up much of the surrounding countryside in vain attempts to uncover this treasure.

most renowned of the early Franciscans in New Mexico, and a powerful driving force in the Christianization program.

The church walls, several feet in thickness, were constructed of thin pieces of red and brown flagstone. Each piece was carefully fitted so that the walls resemble a giant jigsaw puzzle. Beyond the main door is the impressive nave, the sanctuary of the church. This central worship hall is over 100 feet long. At its far end, where the altar once stood, rise massive bell towers, 40 feet high and constructed of thousands of pieces of flagstone.

The Convento

Leading off to the right from the roofless nave is a corridor to the *convento* or living quarters of the priests. Here are the ruins of many small rooms that once served as sleeping quarters, storage areas and kitchen. From their size I would guess that the good padres had extremely cramped

and uncomfortable quarters. But a Franciscan's worldly possessions were few, and he did not come to frontier New Mexico seeking a comfortable life.

That humble friars equipped with crude tools and scant raw materials could erect such churches in an inhospitable wilderness, borders on the unbelievable. The Franciscans made the most of three important assets in this work: keen European-trained minds, burning zeal to win converts to the faith, and free Indian labor.

There are few records to tell us how the padres persuaded the Indians to build the missions — whether by forced labor or labor for love. It probably was a combination of both. Considering the language barrier and the Indian's fanatical clinging to his ancient beliefs, the padres had a difficult task.

Stepping outside the *convento*, I studied the unexcavated ruins of the Indian village. What was it like when

this earth-blown rubble was a three-storied Tigua pueblo? These brown-skinned people whose origins lay deep in the past were peaceful farmers and hunters. When they returned from the day's labors, smoke rising from Quarai's many cook fires signaled the preparation of the evening meal. At sundown Fray Perea, his brown robes whipped by the mountain breeze, led his flock to evening mass in the mission.

Old Ways Continue

But the good padre's teachings never silenced the Tigua drums and the weird chants rising from the mysterious depths of the ceremonial kivas. The people accepted the teachings of the "Brown Robes," but the religion of their fathers was deeply engrained. The gods of the sun father and the moon mother, the bird and snake, the four winds and the four seasons took their place beside the white man's Jehovah. So it was then and so it is still.

Time and legend have woven a cloak of mystery and romance around ancient Quarai. Besides the many stories of buried wealth (usually concerning church treasure) there is an oft-told tale that Quarai is not deserted. I heard the story from a fruit farmer near Manzano.

"To really see Quarai," he said, "you must visit when the moon is full, for that is when the Old Ones are there. They come to sing and dance in the plaza of the village, and the padre is there to lead them in prayer. When he kneels at the altar and the moonlight shines on his silver hair, it is all very beautiful."

The old farmer was dead serious, and his clinging to superstition is in keeping with the timeless charm of the Seven Cities.

Red Death

Quarai was abandoned about 1670. In the middle decades of the 17th Century numerous drouths hit this area. And with failing crops came the Red Death — fierce Apache raiders who made life in the Saline Pueblos one of constant fear. The gentle inhabitants left their homes for the safety of the Rio Grande pueblos, and Quarai became a dead city.

From Quarai I drove around the

INTERIOR VIEW OF MAIN SANCTUARY OF QUARAI MISSION CHURCH. ALTHOUGH THE BUILDING'S ROOF HAS LONG SINCE VANISHED, THE MASSIVE FLAGSTONE WALLS STILL STAND. THREE STONE STEPS IN CENTER LED TO MAIN ALTAR. LARGEST OF EARLY NEW MEXICO MISSIONS, QUARAI CHURCH HAD 5000-SQUARE-FOOT FLOOR AREA. ARCHEOLOGISTS ESTIMATE THE INDIANS LABORED 10 YEARS TO BUILD MISSION.



southern tip of the Manzanos. The road leads through a broad canyon whose southern rim is formed by a long line of flat-topped mesas. Twelve miles beyond Mountainair I turned north at a sign pointing to the ancient Piro village containing the ruins of Mission San Gregorio de Abo. The half-mile side road to Abo passes through a narrow canyon sprinkled with pinyon and cedar.

On a low hill above the road stands the blood-red sandstone ruins of the mission. The village was mentioned in Spanish journals as early as 1598, and Abo Mission dates from about 1628. It was founded by Fray Francisco de Acevedo, and was the headquarters mission for the Saline Country.

Unique Mission

Despite the fact passing centuries have bitten more deeply into Abo than the missions at Quarai and Gran Quivira, it is immediately apparent that this church was unique. Although Abo's ground plan was in the traditional Latin cross, some scholars trace its massive style to the oblong basilicas of early Christian times.

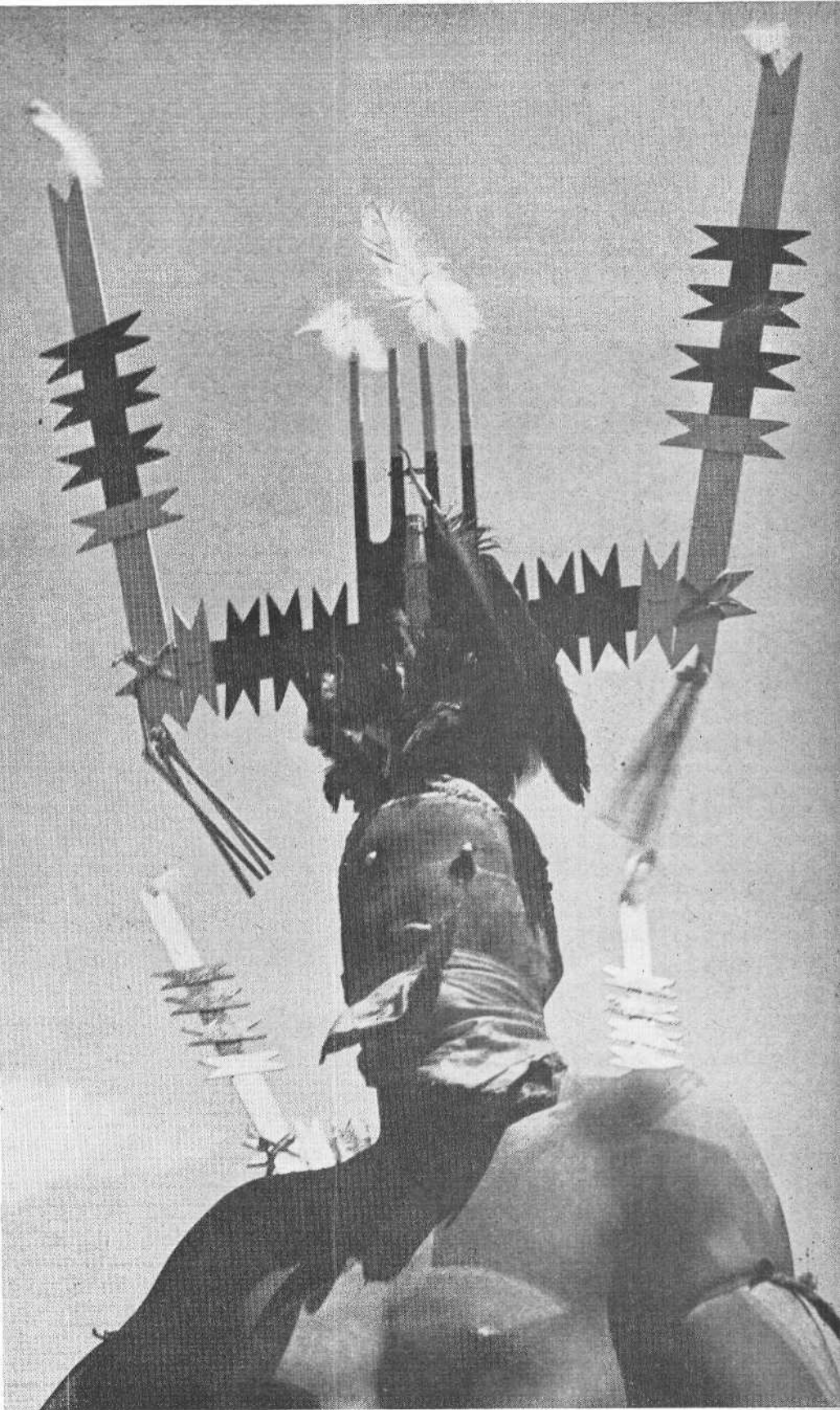
One of Abo's outstanding features is the broad stone terrace that leads to the main sanctuary. Like its sister missions, Abo was constructed with loving hands — every stone carefully placed. In the nave are remains of three adobe altars. Outlined in the crumbling west wall is a great window. The *convento*, somewhat larger than that of Quarai, surrounds two large courtyards in which the fathers sat in the evening to gaze at the majestic mountains.

While Abo's church was smaller than Quarai's, the Indian village here probably was larger. Like their Quarai neighbors, the Abo inhabitants were peaceful hunters and corn-and-squash farmers. Daily they sought the favor of their gods at ancient rituals in the sacred kivas. When the white strangers dressed in flowing robes came to the village with a new God, the people accepted Him and gave Him a place beside the old gods. Was it not wise, they reasoned, to have all the protection and blessing they could muster?

A New God

So they worshipped the new God in the great stone dwelling the padres had showed them how to build. But they accepted only those facets of Christianity that suited their lives and to them seemed good. To this day the Pueblo people use this approach to Christianity.

Prayers were not enough to halt the warring Apaches, and like the other Saline villages, Abo suffered a linger-



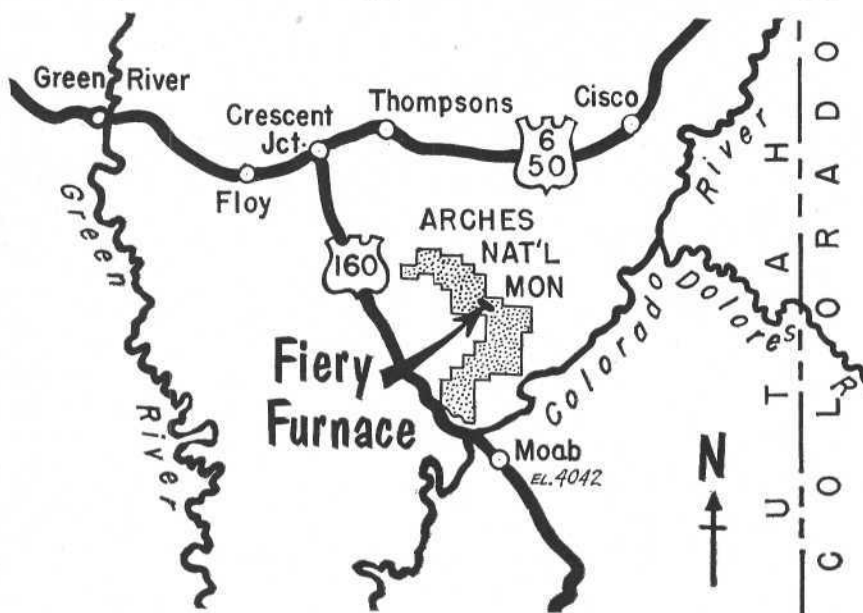
APACHE INDIAN — CAUSE OF THE FEAR THAT LED TO THE ABANDONMENT OF THE SEVEN SALINE PUEBLOS. PHOTO SHOWS MESCALERO APACHE IN DEVIL DANCE GARB.

ing death until final abandonment in the 1670s.

The Saline missions are a part of

America's heritage. They symbolize a turbulent era when Spanish power and influence swept across the Southwest. They are a memorial to the valiant and resourceful priests who coveted martyrdom as their only reward in this life.—END

Exploring the Fiery Furnace . .



Few men have penetrated the Fiery Furnace in Arches National Monument—and for good reason. This is a primeval, perpendicular world—broken and deeply etched.

By CECIL M. OUELLETTE

UNEXPLORED! The word dominated my thoughts as I drove from Moab, Utah, to the red-rock wilderness of the Fiery Furnace. This little-known region lies north of the Colorado River in Arches National Monument. A dusty dozen miles of road leading from U.S. Highway 160 makes the Furnace fairly accessible; but the few visitors who come here seldom wander far from their automobiles, for this country is a wild tumbled maze of sandstone—so rough and rugged that rarely does it experience the boots of man.

Some of the Monument rangers have explored the Furnace's outer fringes, and found several natural stone arches and weird-looking rock formations. Beyond this rim of sheer canyon walls is an untrodden land—void, silent and almost uncanny in its solitude.

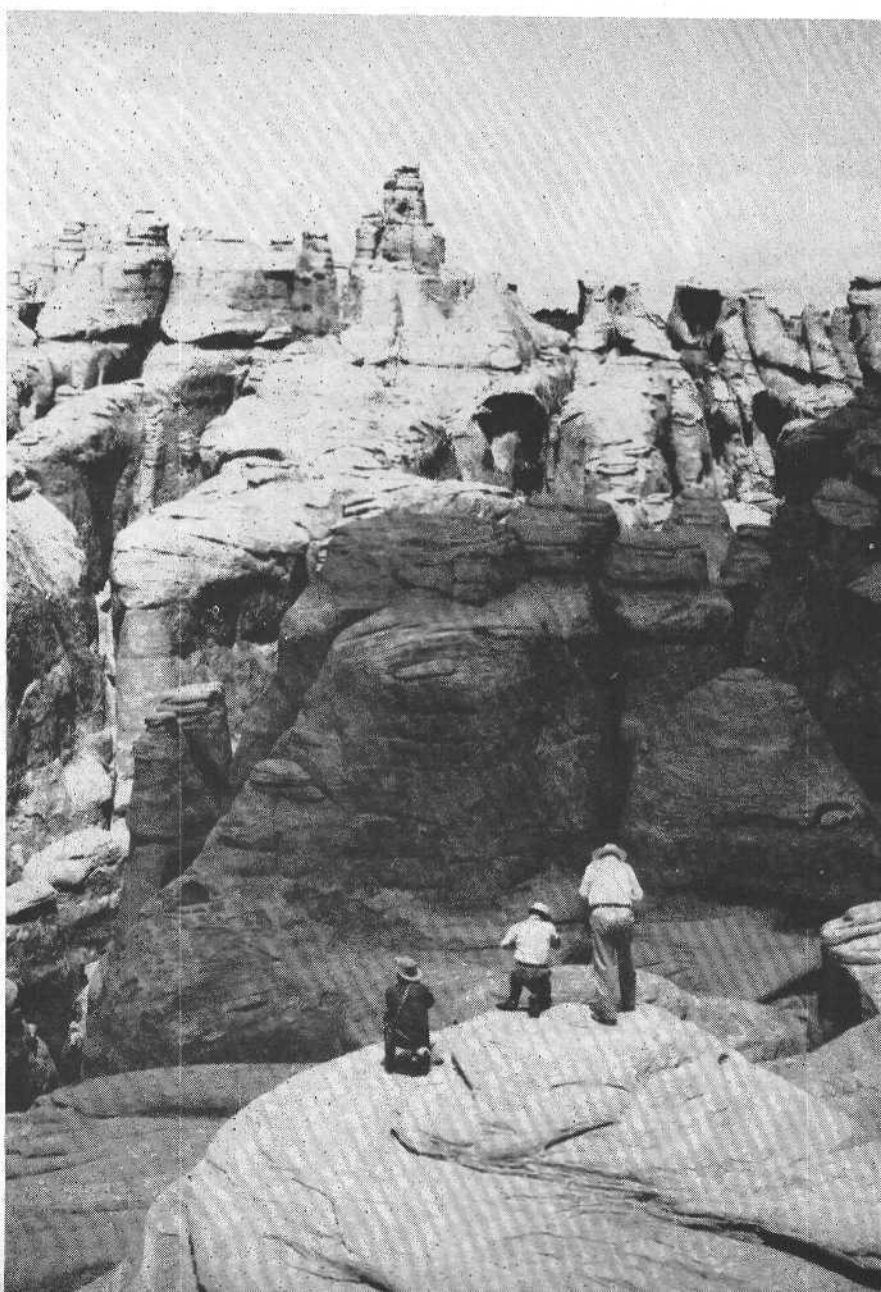
The Trip Begins

Superintendent Bates Wilson and Rangers Lloyd Pierson and Ed Abbey met me at a pre-arranged site. We loaded our gear in a truck, and headed toward the furnace. We stopped once on a small rise to gaze across a desolate-looking arroyo. Stretching for five miles northward was the jumbled landscape of sandstone pinnacles, slabs and huge towers of the Fiery Furnace, so named because in bright sunlight this land appears to glow as if heated by a mighty underground fire.

Never had I seen such difficulty in the desert. It was easy to comprehend why this was a land that nobody knew.

We carried in our packs a small amount of food and water, cameras and film, and a nylon climbing rope. The latter is essential as a safety factor while moving over this type of terrain.

We climbed to a high quartz-littered ridge, and planned a route through the maze of sandstone formations be-



THE EXPLORERS PAUSE TO PHOTOGRAPH THE RUGGED GRANDEUR BEFORE THEM.

fore us. From this vantage point, the land's geological story was an open book. These rocks were deposited as sediment in a Jurassic sea. Gray and buff Navajo Sandstone extends from the desert to the red-rock. Above the Navajo is a 50-foot layer of red wavy sandstone known as the Carmel Formation. The third stratum is Entrada Sandstone, forming the upper part of the cliffs. It is the orange-to-reddish Entrada that the wind, carrying grit of crumbled sand, has chiseled and carved and gouged-out arches, pinnacles, coves and balanced rocks.

Broken Land

The Entrada is fractured by a series of cracks which run at right angles to one another. Over long periods of time, ice has formed in some of these crevices, gradually enlarging them into deep gorges and fissures; creating, as a result, huge sandstone slabs known as "fins." To complete this work, it appears as if a giant had pulled a rake across the Fiery Furnace in sweeping strokes.

We started up a wide canyon, and almost immediately spotted a cave high up in a cliff. Steps had been hacked up to it in the sandstone—first such occurrence ever discovered in the Monument. I climbed this ancient route, and inside the cave found a mano, metate and scraper. Dust a half-foot deep covered the floor. The Monument men recorded the discovery and made note of the fact that this cave was a promising site for future archeological exploration. Nearby was one of the largest chipping areas (a place where the Ancients fashioned stone implements) I have ever seen.

Time for Lunch

Following a steep gully, we carefully made our way to the eastern rim of the Fiery Furnace. Then we sat down in the shadow of the rimrock to eat our meager lunches. The vista was beautiful from our perch in the sky. The broken land at our feet was alive with every hue of the rainbow, and in the distance the La Sal Mountains' massive white towers pierced the clouds of an oncoming storm.

After lunch we discovered a campsite of the Ancients. On the surface were stone knives, scrapers, arrowheads and drills. Bates said they were

the finest artifacts ever found in the Monument.

Continuing along the rim, we headed for an arch that Ranger Abbey had found some time before. We dropped off a fin, and balked at the edge of a cliff which fell 120 feet to a narrow canyon below.

Cliff Arch

"Where's the arch?" asked Bates.

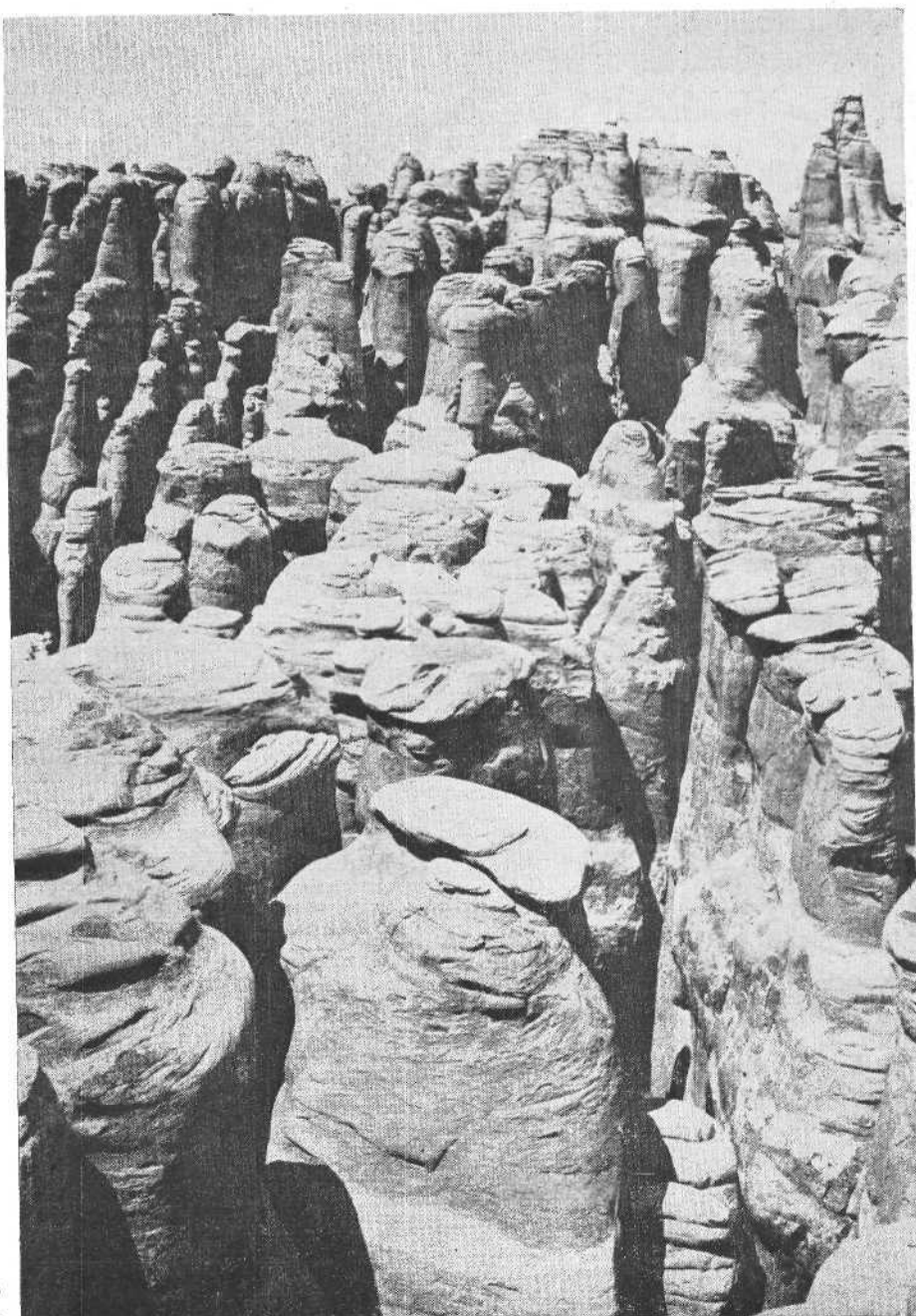
Ed moved to the left and disappeared in a rock cleft—right through a huge sandstone fin! We followed him into the concealed opening of a 30-foot span arch. On the other side the world dropped away, and high walls shot upward across the chasm so that the only way to view the arch was by looking back as you passed under it. Because of its precipitous

location, Cliff Arch was decided as an appropriate name.

The Return

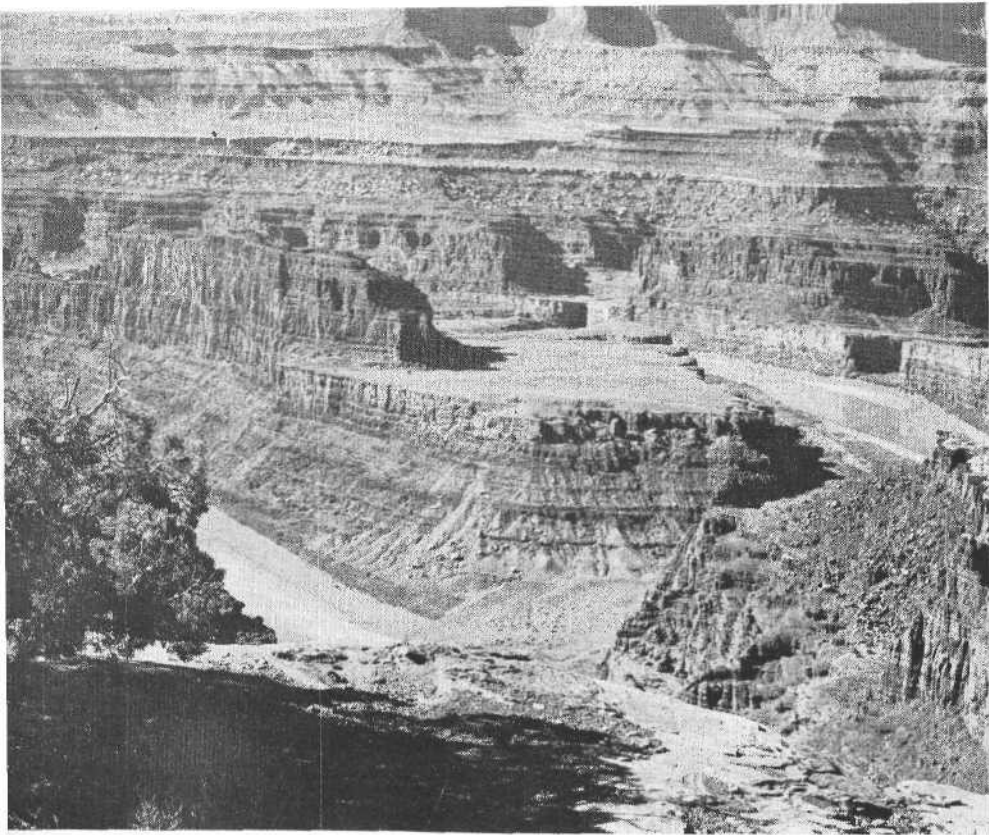
The return climb to the southern rim was punctuated by leaps across yawning chasms, and airy traverses along narrow ledges. The sun was on the western horizon when we got back to the truck.

A new all-weather road into Arches Monument is in the Park Service's Mission 66 plans—but no easy path—for machine or man—ever will be cut through to the heart of the land we had just explored. Bates has ordered that only guided tours will be allowed into the Fiery Furnace. This is a region unmarred by trails or initials scratched on sandstone walls. It is completely unspoiled country.—END



HIGH PINNACLES, DEEP CANYONS AND VERTICAL WALLS MARK FIERY FURNACE.

Utah Creates State Parks



DEAD HORSE POINT ON THE COLORADO RIVER.

By FRANK A. TINKER

SOME LONG-neglected desert areas in Utah have finally been recognized as the assets they are. With the appropriation of an initial million dollars by the state legislature this year, a program of acquiring such sites from the Bureau of Land Management and other agencies has begun. Already named for protection as state parks are Dead Horse Point, overlooking the great chasms of the Green and Colorado rivers, and Goblin Valley, where wind and water have sculptured a fantastic zoo of sandstone shapes.

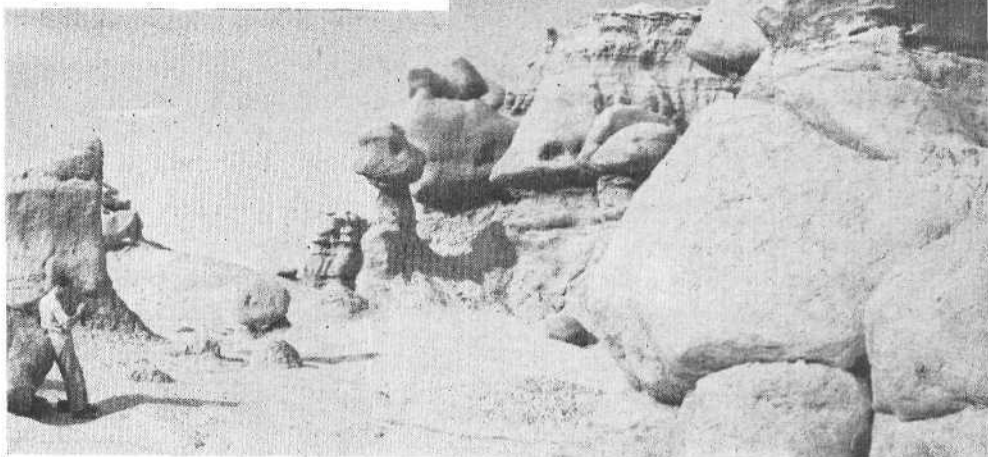
A prime reason for extending state care to such areas is the increasing incidence of vandalism, which threatened the destruction of prehistoric hieroglyphics, petrified forests, and the overall beauty of the landscape. Many such petroglyphs and forests, including Grand Gulch, Escalante and Circle Cliffs regions, also have been designated as future state park sites and will be acquired as the funds are appropriated.

In all, more than 20 such desert areas have been proposed for the growing state park system.

Although only Dead Horse Point and Goblin Valley will be under state care by this summer, travel into all the other sites can be made by jeep or horseback.—END

CENTER—GOBLIN VALLEY SANDSTONE HAS BEEN CARVED INTO FANTASTIC SHAPES.

RIGHT—JEEP ROAD TO DEAD HORSE POINT.



PARKS ASSOCIATION MOVES WESTERN OFFICE TO TUCSON

The National Parks Association has moved its Western office from Carmel Valley, California, to Tucson. The Association said the transfer was prompted by the fact that the Pacific Coast and Pacific Northwest areas already have many active conservation organizations, but the Southwest is "seriously in need of encouragement in preserving its parks and wilderness."

The Association pointed out that the Southwest contains the largest concentration of National Park Service units in the country. In recent years, due to tremendous population growth and many other factors, the threats to these areas have been on the increase.

"As part of our national education program," the Association said, "an office in Tucson will do much to stimulate interest in preserving the rich scenic heritage of the Southwest."

J. F. Carithers, the Association's Western Field Representative, is located at 215 North Court, Tucson. His mail address is P.O. Box 5892.



By BENN KELLER, manager
Ford Desert Proving Grounds
Kingman, Arizona

Sand and Dust

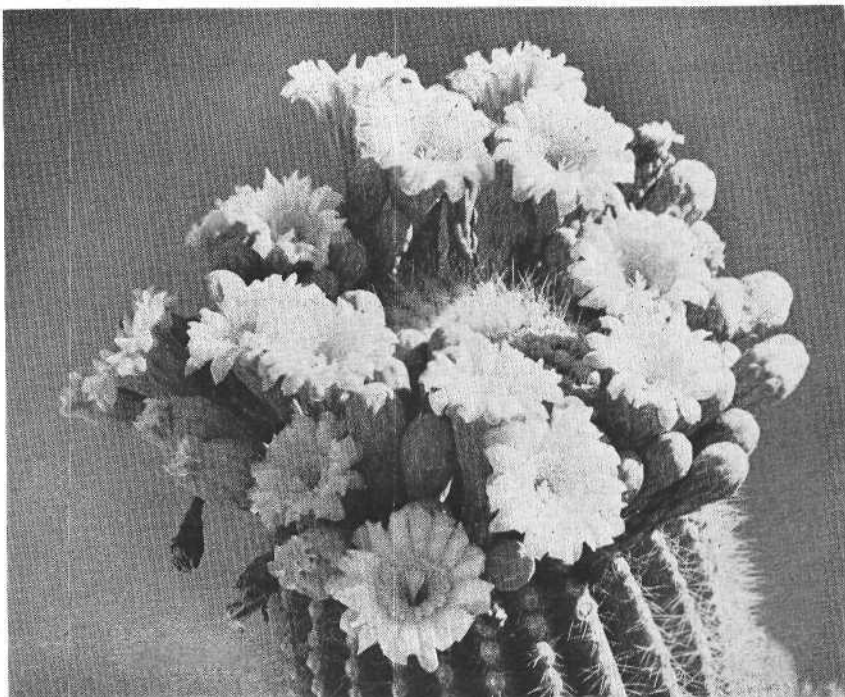
Abrasive dust and sand encountered in the Southwest is damaging to all parts of the vehicle which it contacts. It is very detrimental to exterior body finishes and windshield glass, with no real solution to the problem yet presented. The car manufacturers do, however, provide various degrees of protection for the engine in the way of carburetor air-cleaner filters and crankshaft ventilation filters, which are usually built into your crankcase oil filter cap. When driving in the Southwest, be sure your filter elements are clean, and serviced at frequent intervals.

The frequency of automatic transmission oil and engine oil changes should be stepped up for added engine protection in unusually sandy areas. Be sure to use the specified weight oils (SAE grades) to correspond with existing temperatures.

Sand is used as an abrasive in the manufacture of certain engine parts to grind them to size for proper clearance. No extra grinding is necessary after the vehicle reaches the owner's hand. You should take the necessary precautions to prevent a continuation of the grinding process by preventing the abrasive sand to enter the engine through defective or improperly maintained carburetor air-cleaners and crankcase filters.

PHOTO HINTS

by Bob Riddell



Cactus Flowers . . .

Cactus blossoms appear on the desert from March to June, depending upon the time and amount of winter rains. One popular subject for flower fanciers is the white wax-like Saguaro—the state flower of Arizona.

The best time to photograph the blossom is early morning when the flower has opened fully. Find a cactus that has flowers facing the sun for good detail. In afternoon, the flowers begin to close and droop.

Photographing flowers can be tricky. Get as close as your lens will allow, and be careful of distortion. A close-up lens is a good investment if you want best results. Use a sturdy tripod and cable release.

For added interest, particularly on color shots, you can use colored cardboard squares as background; this gives spectacular combinations for slides, a change from the more conventional and sometimes confusing natural backgrounds. For that fresh dew-like effect sprinkle a little water on the blossom before shooting.

When cactus flowers do not face good light, and fill-in light is necessary for darkened areas, I find a peanut bulb in my flashgun works perfectly. I cut my normal lens setting a half stop to compensate for the flash. Shoot when the breezes are quiet to avoid fuzzy pictures. Patience is a big asset. An aluminum cardboard bounces the sun's rays nicely, too. Take a small stepladder, for some cactus arms are above your head.

Photograph above: Saguaro cactus blossoms taken in early morning light. Camera data: Speed Graphic 4x5, five-inch lens, Super XX film. Exposure: 1/25th second at f. 18 with yellow filter to darken the sky and bring out the white blossoms. On this shot a plain sky was used as a background—clouds would have distracted from the blossoms.

Photo Hints will be a regular feature in Desert Magazine. Author-photographer Bob Riddell was born in Philadelphia 38 years ago. Since 1927 he has been a resident of Tucson. He was educated in that city and attended the University of Arizona.

Riddell became interested in writing while in college, and many of his early attempts were published in leading travel journals. Eight years ago he decided to combine writing and photography, so he took up the

camera and "shot hundreds of sheets and rolls of film to learn how it was done."

Learning-by-doing paid off, and in 1955 Riddell turned to freelance photography—again with success. In that same year he became publicity director of the Tucson Sunshine Club.

The Riddells (Mrs. Riddell handles a camera, too) have two children, Robert Ricki, 2½, and Cherri Lee, 10 months.

Bird of the Sagelands . . .



One of the
Great Basin's
most distinctive
denizens is the
sage grouse, a
chicken-like
bird whose
natural abode
is restricted to
the sagebrush-
covered
desertlands.

By EDMUND C. JAEGER, D.Sc.
Curator of Plants
Riverside Municipal Museum

THE SAGE GROUSE of the Great Basin sagebrush deserts is the largest grouse in America, and second only in size to the European capercaillie. A fine bird it is, almost as large as a small turkey, beautifully marked and with habits so unique that it has held the rapt attention of observers since the days of Lewis and Clark, who saw the sage grouse in the headwaters of the Missouri River and the sagebrush plains of the Columbia. The explorers named it, "cock-of-the-plains."

Ornithologist Charles Lucian Bonaparte gave the handsome bird its scientific name, *Centrocercus urophasianus*, in 1827. The first or generic name literally means "pointed tail" (feathers), and the last or specific name, "tailed-pheasant." Indeed the tail, especially of the male bird, when widely spread star-like, is one of the most noticeable and strikingly handsome features of this big grouse. It is especially seen to advantage during courting, a most spectacular performance.

When in April and May the vain-glorious

polygamous cocks start to strut, "it is a sight really fantastic and great to behold," wrote Captain Bendire in 1877. "Early one morning in the first week of March, I had the long-wished for opportunity to observe the actions of a single cock, while paying court to several females near him, and I presume he did his very best. His large pale yellow air sacs (of the neck) were fully inflated, and not only expanded forward but apparently upward as well, rising at least an inch above his head, which, consequently, was scarcely noticeable, giving the bird an exceedingly peculiar appearance. He looked top-heavy and ready to topple over at the slightest provocation.

"The few long, spiny feathers along the edges of the air sacs stood straight out, and the grayish white of the upper parts showed in strong contrast with the black of the breast. His tail was spread out fan-like, at right angles from the body and was moved from side to side with slow quivering movements. The wings were trailing on the ground. While

in this position he moved around with short, stately and hesitating steps and gingerly, evidently highly satisfied with his performance, uttering at the same time low, grunting, guttural sounds, somewhat similar to the purring of a cat when pleased, only louder."

This show is always concluded by expulsion of air from the membranous neck sacs with a number of "chuckling, cackling or rumbling sounds."

Principal food of this grouse consists of the tender buds and bitter aromatic leaves of the three-toothed or Great Basin sage (*Artemisia tridentata*) (Desert Nov. '58). In summer this bird supplements its diet with various leaves, flowers and pods of wild legumes, and a few insects such as ground beetles, grasshoppers and moths.

On a cool mid-summer morning in western Nevada I saw a grouse picking cicadas off of the shreddy bark of sagebrush stems where these insects were in hiding.

In winter when snow is on the ground, sagebrush becomes almost the exclusive diet of the sage grouse. In areas where sagebrush is eradicated, as often it is by stockmen who look upon it as a noxious weed utilizing land that should be growing grass, this large and interesting bird must cease to exist.

Digestive Organs Differ

In accordance with its very specialized food preferences, the digestive organs are different from those of most other game birds. Instead of having a strong muscular gizzard, this organ has been changed to a thin weak membranous sac resembling the stomach of a raptorial bird such as the hawk, eagle or owl. Indeed, the grouse's gizzard is designed for soft foods only.

When the nesting season arrives, the females go off to themselves, making nests which usually are little more than slight depressions in the ground. Sometimes the nests are lined with a few dried sage leaves and a stick or two.

The eggs, eight to 15 in number, are greenish-gray, much the color of sagebrush, with many dots and round spots of reddish brown. Peculiarly, as with the eggs of several other grouse and plovers, this gray-green ground color is rather easily rubbed off before incubation begins. During their nightly foraging through the brush, coyotes and foxes often gobble up the eggs or at least reduce their number. Other egg destroyers are crows and magpies.

Before their feathers are well developed, the young nestle under the mother at night, but soon they sleep in a circle about her, each with its head pointed to the outside. The diet of young birds consists primarily of insects picked up after the mother scratches in the litter of sagebrush leaves.

When old enough to fly, the young already are eating the tender sagebrush leaves, and gathering into flocks. They grow rapidly, and by early November are the size of adults. Soon they are consorting with the older birds.

Grinnell's Description

A century ago these winter flocks sometimes were made up of hundreds of birds, but this is a thing of the past. This is how Dr. George Grinnell described these flocks:

"In October, 1886, when camped just below a high bluff on the border of Bates Hole, in Wyoming, I saw great numbers of these birds, just after sunrise, flying over my camp to the little spring which oozed out of the bluff 200 yards away. Looking up from the tent at the edge of the bluff above us, we could see projecting over it the heads of hundreds of birds, and, as those standing there took flight, others stepped forward to occupy their places. The number of grouse that flew over the camp reminded me of the old-time flights of passenger pigeons that I used to see when I was a boy. Before long the narrow valley where

the water was, was a moving mass of gray. I have no means whatever of estimating the number of birds which I saw, but there must have been thousands of them."

J. K. Townsend, naturalist and writer who made a trip in the 1830s from St. Louis to Washington state, wrote: "We found these birds so numerous in some places that at times we even made use of our riding whips to prevent them from being trodden to death by our horses."

It is the habit of sage grouse when surprised to run rather than fly. As they move close to the ground amidst the sage thickets, it is difficult for the eye to follow them because of their protective coloration.

Protection

When closely approached they are given to sinking to the ground and then stretching the neck out in line with the body. Under these conditions it is very difficult to spot individuals. If pressed too closely, the birds generally take flight, rising with an explosion of wings that startles even the experienced bird watcher.

When first leaving the ground, sage hens, as these birds are often called, rapidly beat their wings, but soon after they can sail with set wings for tremendous distances—up to one-half to three-quarters of a mile. When a number of birds rise in flight, they move independently and not in a flock. As an individual bird alights, it almost immediately moves off to one side. Seldom is it flushed from the place where an observer thinks it is hiding. This is a stratagem contributing much to the birds' safety.

Generally, sage grouse are found in places where they have easy access to streams or springs. They drink water at least daily, and in hot weather perhaps several times a day.

At night they gather at roosting sites on bare ground where the sage plants are rather low and well scattered. Each bird then prepares a bed by scratching the earth to free it from sticks and pebbles. All members of the flock are said to bed down so that they face in the same direction.

A peculiar phenomenon noticed at these roosting sites are dabs of a black deposit resembling licorice or black molasses. It is a fluid thought to be regurgitated by the birds. "Can it be," asked Dr. Joseph Grinnell, "that specialization for using the sage leaves as food has led to a digestive equipment on the part of the sage grouse for getting rid of the major part of the possibly injurious bitter non-nutritive 'principle' of the sage?"

Dependent on Sagebrush

The broad sagebrush-covered plains and valleys of the west, especially the Great Basin states and southwestern Canada (British Columbia and southern Saskatchewan) comprise the home of the sage grouse. It formerly ranged eastward into western Nebraska and North Dakota; and it was common in northwestern New Mexico, but the sheepherders, wood gatherers and hunters were responsible for its extermination there. The bird met a similar fate in the Black Hills of South Dakota.

As Dr. Edward H. Forbush said, the sage grouse "stands or falls with the sagebrush, and in these days it commonly falls. . . . Like all the game birds it can hide or fly from its natural enemies, but cannot withstand the combination of man, dog and gun," and I can add, the land-clearers and particularly the grazers of sheep.

There is yet a chance to save this bird. There are thousands of acres of sageland where it could be reintroduced, and if given protection from hunters and developers, it probably would make a good comeback. Such efforts should be made now, not a few years hence. Time is running out; the wilderness areas are rapidly disappearing.

—END

True or False

The 20 questions below should give you a fair indication of how much desert knowledge you have soaked up during the years or months you have been exposed to this magazine. The questions are taken from many facets of the desertland. 12 to 14 correct answers is a fair score; 15-17 is good; 18 or more is superior. The answers are on page 33.

1. The western burrowing owl is not an owl, but a woodpecker. True..... False.....
2. The Mojave River in southeastern California is navigable for most of its length. True..... False.....
3. The accordion-like ribs of the giant saguaro cactus expand to store water, contract during periods of drouth. True..... False.....
4. John Muir is best remembered for having built a bridge over the Hasyampa River in Arizona. True..... False.....
5. Tombstone, Arizona, is known as "The Town Too Tough to Die." True..... False.....
6. The ichthyosaur, whose fossil remains are being preserved in Nevada, was a land dweller. True..... False.....
7. The one plant that marks better than any other the domain of the Great American Desert is the creosote bush (*Larrea*). True..... False.....
8. The sidewinder is the only snake in the Southwest that moves by looping its body forward. True..... False.....
9. Joseph Wood Krutch is one of the best known contemporary Southwest silversmiths. True..... False.....
10. Arizona heavy industry is largely concentrated in the Sedona area. True..... False.....
11. The Great Salt Lake Desert lies west of the Great Salt Lake. True..... False.....
12. *Opuntia* is the only species of monkey native to the Southwest. True..... False.....
13. Historians list the occupation of Jim White, the man who discovered the Carlsbad Caverns, as a cowboy. True..... False.....
14. Wheat was the chief food crop of the Pueblo Indians before the Spanish Conquest. True..... False.....
15. Through tradition, women do not participate in the Papago Indians' annual saguaro fruit harvest. True..... False.....
16. General Stephen W. Kearny's Army of the West numbered less than 2000 officers and men. True..... False.....
17. The water ouzel is the only desert snake that can climb trees. True..... False.....
18. Mt. Charleston near Las Vegas, Nevada, is a popular ski run. True..... False.....
19. International measure for a flask of mercury is 76 pounds. True..... False.....
20. Petrified wood makes good campfire fuel. True..... False.....

FLAMING GORGE DAMSITE CLOSED TO BOATS

Vernal, Utah—The Bureau of Reclamation has closed the Flaming Gorge damsite construction zone to all boating. Officials said hazardous conditions on the Green River have been created by the blasting and scaling of rocks from the canyon walls at the damsite.

Boating parties will be able to leave the Green River just below Ashley Falls at the new temporary suspension bridge built about two miles upstream from the damsite. From that point boats and gear can be transported by road to Little Hole and re-entry into the Green River.

Most of the road is steep and rough on the portage around Flaming Gorge damsite. Officials warned that only four-wheel-drive vehicles, or trucks with powerful low gears, should be used in the detour from the suspension bridge to Little Hole. The road is extremely steep at the point where it leaves the river.

This summer a contractor is scheduled to clear the reservoir area in the 25-mile reach from the damsite to near Linwood, Utah. Boating in the canyon could be hazardous while the clearing operation goes on.

LITTERBUG LAW ON BOOKS, BUT SO FAR NO ARRESTS

Salt Lake City—Deputy Attorney General Walter L. Budge said he has not heard of any arrests recently on Utah's anti-littering law—and probably not since the law was enacted by the 1957 Legislature, the *Salt Lake Tribune* reports. The law provides for fines up to \$299 for persons convicted of highway littering.

Alarmed at increased amounts of trash being deposited along Utah's roadways, and anticipating a heavy summer influx of vacationers, the State Road Commission has urged the state's peace officers to enforce the law. In the commissioners' opinion, it would be better to have regular law enforcement officers police the highways for litter violators than to deputize members of road maintenance crews.

POETRY CONTEST

You are invited to enter your desert-subject poetry in Desert Magazine's monthly contest (see page 2). Only the winning entry will be published each month—all others will be returned immediately after judging takes place (provided stamped self-addressed envelope is included). Poems must be of a desert subject, not more than 24 lines in length, and previously unpublished. Winning entries will receive \$5. Mail to: Poetry Contest, Desert Magazine, Palm Desert, California.

DESERT MAGAZINE'S



FILLETS MONTEZUMA (Serves 6)

- 6 fillets of Flounder
- 3 tablespoons margarine
- 1 onion, minced
- 1 tablespoon flour
- 1/2 cup white wine
- 1/3 cup hot water
- 1/2 teaspoon lemon juice
- Salt and pepper to taste
- 1 tablespoon chili powder (level)
- 1 teaspoon grated bitter chocolate
- 1 dozen mushrooms, thinly sliced

Cook the onions and mushrooms together in the margarine until soft and yellow. Add the fillets after sprinkling them with flour, salt and pepper. When the fish is cooked, add the white wine, water, chili powder and chocolate. Simmer over a low flame for 10 minutes. Serve immediately.

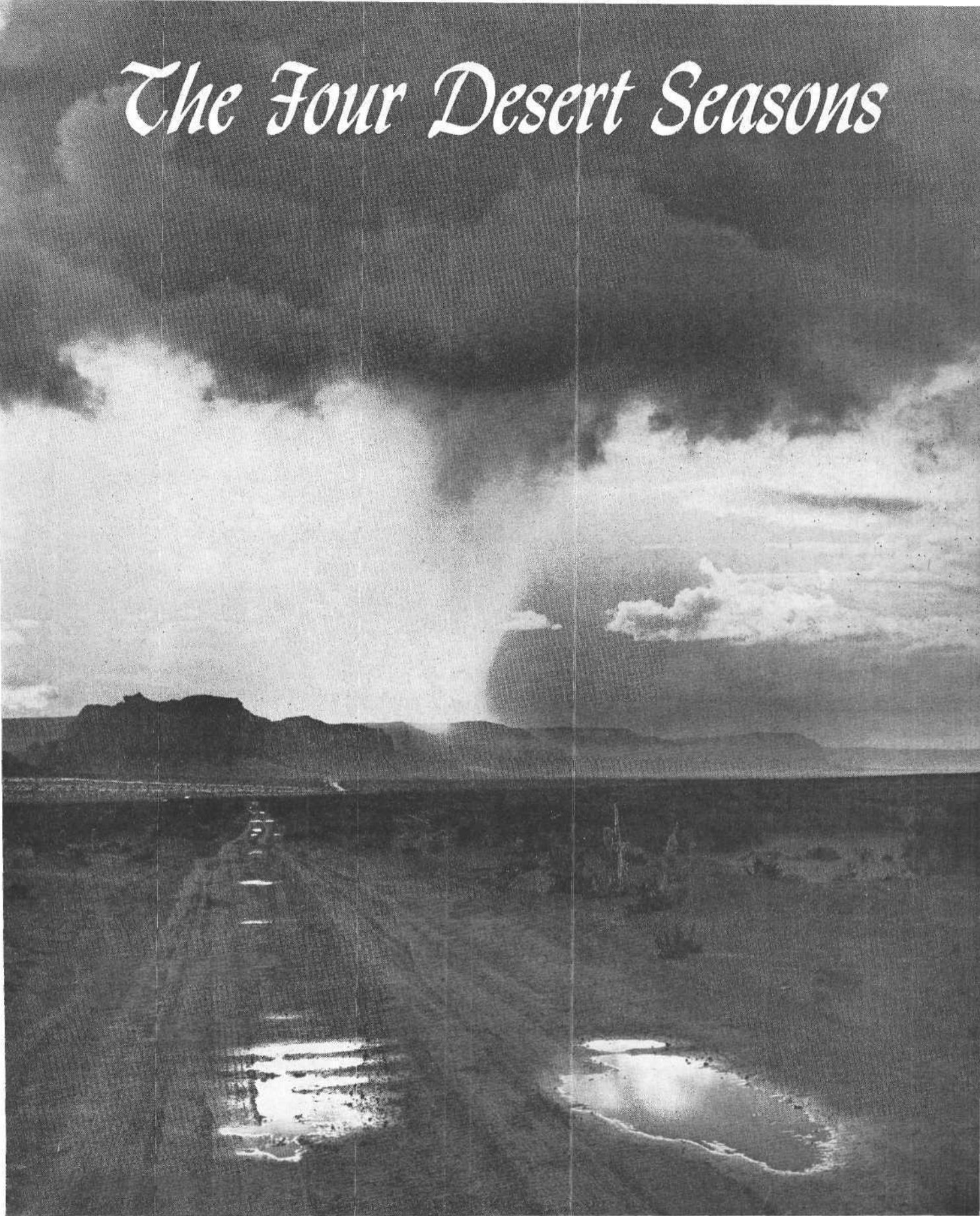
"I enjoyed this tasty dish in a restaurant in Phoenix 20 years ago," writes Dolores C. McConnell of Roslyn, New York. "The chef swapped recipes with my father. He told us he had learned to make this dish about 10 years previously while employed in a little restaurant in Mexico City."

CAMPFIRE SUCCOTASH (serves 4)

- 1/2 cup chopped onion
- 1/2 cup chopped green pepper
- 2 tablespoons bacon fat
- 1 can creamed corn
- 1 can red or kidney beans (drained)

Saute onion and green pepper in bacon fat, then add corn and beans. Season to taste with salt and pepper. Heat thoroughly.—Mary S. Salyards, Ontario, California.

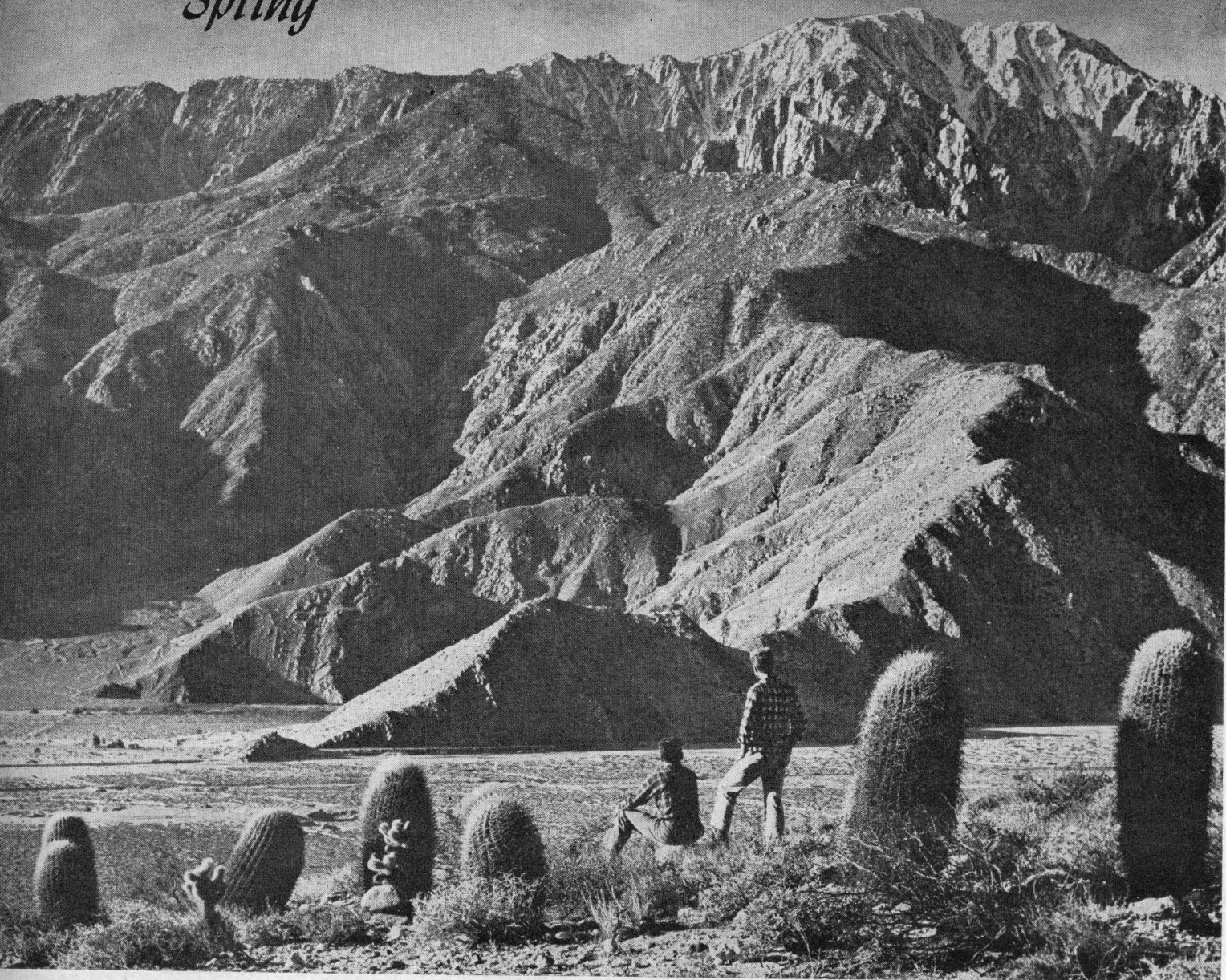
The Four Desert Seasons



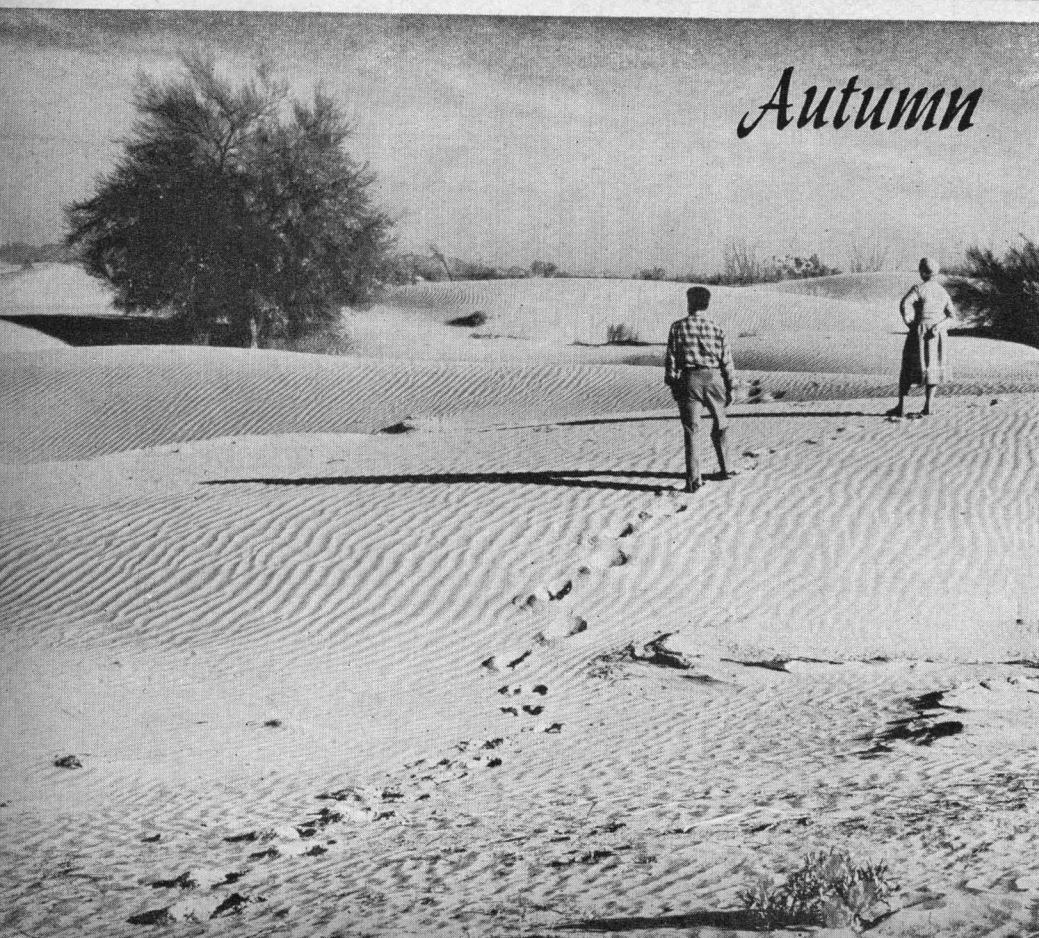
Photographs by
JOSEF MUENCH

A summer cloudburst moves swiftly across the northern Arizona mesa country. In some areas of the Southwest, summer is the "rainy" season. For a look at the desert's other seasonal aspects, turn the page . . .

Spring



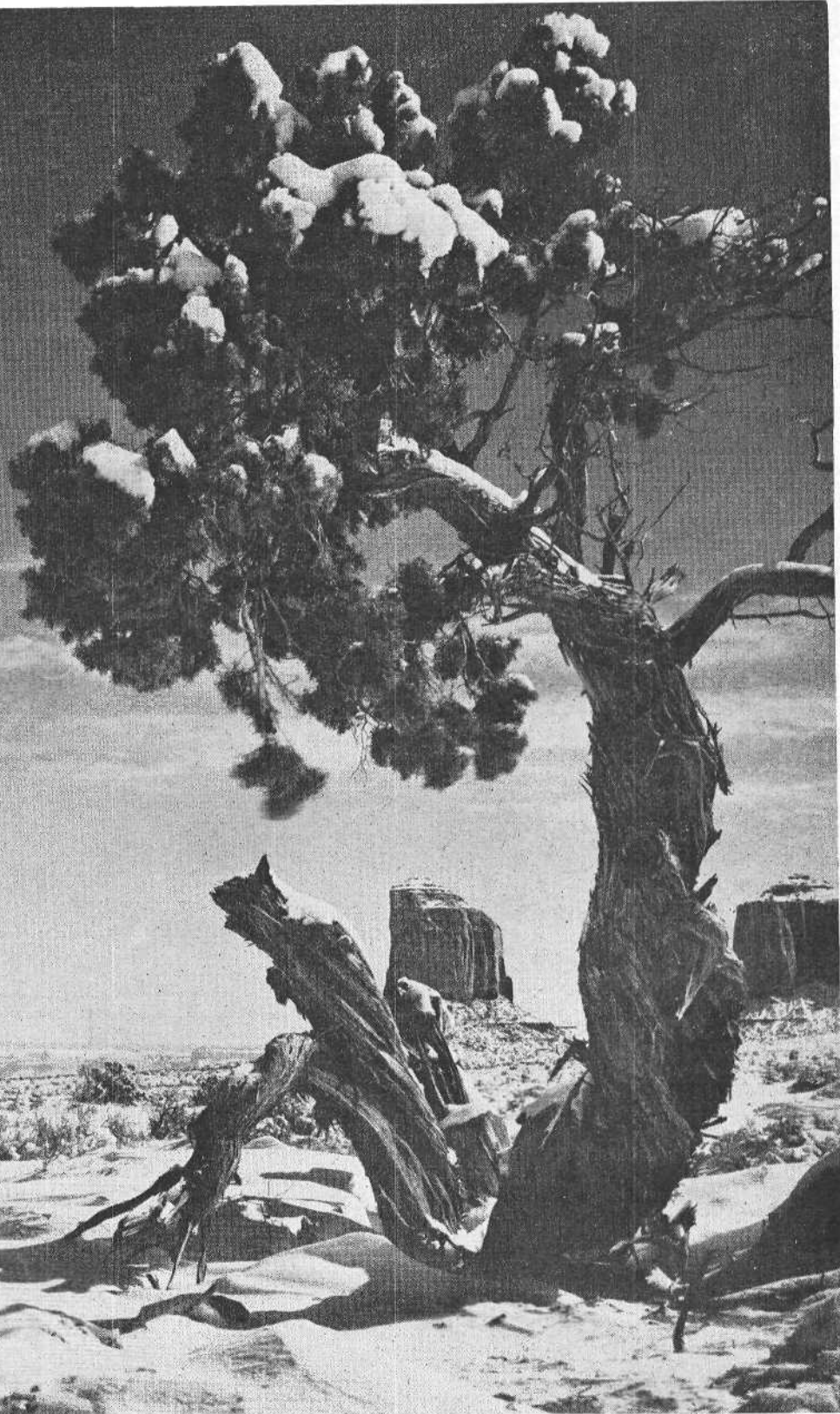
Autumn



Furtive spring's beauty depends entirely on the past winter's rainfall. Barrel cacti, foreground, have expanded to a round fullness by storing precious water. Pictured above is Mt. San Jacinto, rising a sheer 10,000 feet over San Geronio Pass in Southern California. Winter snows at these elevations last far into spring.

When summer is past and it is autumn, many desert devotees revisit the outdoors. Transient patterns of wind on sand were photographed near Yuma.

*The
Face
of
Winter*



*Touched with the magic of winter, a gnarled juniper surveys
the snow-covered floor of Monument Valley in Arizona.—End*

Fighting was something they knew . . .

As each man who loves a prize fight comes for his own reason, so had he his. It was the reason why they came out of the hills of early Nevada — prospectors and buckaroos and shearers on foot and horseback — all come to watch a fight. Because this was something they knew. Like the men in the ring, they too had stood alone and fought alone, with their only weapons the hands that God gave them, and the fight was everything they had ever done and seen and felt. In that square was spoken the only language they understood, undisguised by subtleties and exposed for all the world to see. They saw and recognized the blind and stupid courage of an animal, they saw the beautiful courage of men who were afraid and yet fought, and they saw caution and fatal hesitation and cowardice.

And when it was over, they went away satisfied with the decisive knowledge of victory or defeat. A man had won and a man had been beaten, and the thing was settled, and it was not like the helpless inconclusion of argument.

It was something that all the old country men who had come to a new land could understand. Because they too had to stand alone and without home to turn to for help, because they had forsaken home, and this was their new country, and they were fighting for acceptance.

—Robert Laxalt's "Sweet Promised Land,"
published by Harper & Brothers

GANS vs. NELSON

Some of the old-timers still living
in Goldfield, Nevada, remember
"The Fight of the Century"

By EUGENE L. CONROTTO

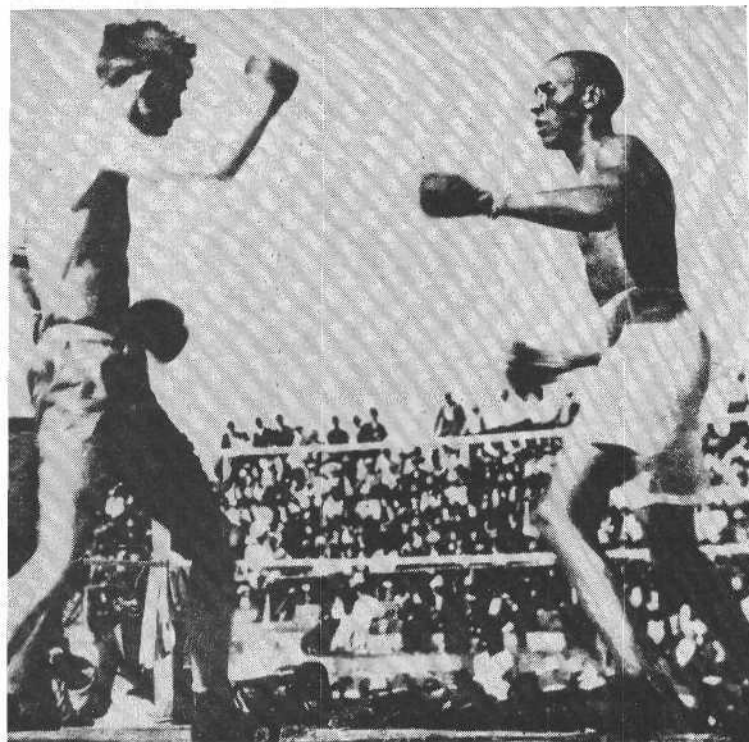
A GROUP OF THE old-timers still living in the dying mining camp of Goldfield, Nevada, got together last year to dedicate a plaque to the 1906 Gans-Nelson world's lightweight championship fight. The tablet was set in a sandstone monument some of the boys had erected during slack periods in their one-man mining operations.

Pete Moser, Goldfield gas station operator and prime mover of the project, makes no bones about the fact that nostalgia was not what prompted the building of the monument. Rather, it was the hope that this humble pile of stones will provide the promotional spark that will stem the tide of utter collapse, and rejuvenate Goldfield "on the

long road back." Once the home of 30,000 persons, Goldfield now has 300 residents.

The Gans-Nelson fight—a half century and three years ago—also was a publicity gimmick. Its avowed purpose was to "put Goldfield on the map," and this it did, for many fight devotees regard the marathon bout as the most exciting and dramatic ever staged, and even today, Goldfield is better known as the place where Gans and Nelson fought than it is as a mining camp that produced \$100,000,000 in gold during its brief span.

Spawned at the turn of the century, Goldfield was the last of the Nevada bonanza towns. A 22-year-old half-



FIGHT THAT PUT GOLDFIELD ON THE MAP.
CHAMPION JOE GANS, RIGHT, SHAVED ALL
HAIR FROM HIS BODY TO MAKE THE WEIGHT.

breed Cherokee prospector, Harry Stimler, made the initial strike which drew miners, boomers and stock brokers from the four corners of the world to this raw sage-covered basin in the shadow of sombrero-shaped Columbia Mountain. By 1904, there were 5000 people in Goldfield, and the stagecoach companies estimated 150 to 200 new citizens were moving in daily. It was a promoter's town. Most of the mining ground was held by lessees, and the need for big money to develop the mines was ever-present. Somehow, the wonders of Goldfield had to be publicized. The mining promoters discussed the usual mine camp promotions—Fourth of July Celebration, Hard Rock Drilling Contest, Prize Fight. They settled on the latter, for boxing was emerging from an abyss of disrespect, and it was daring and different enough to bring the community the kind of notoriety the promoters were seeking.

Tex Rickard's Start

A 35-year-old saloon keeper who had come to Goldfield from the boom camps of Alaska and the Klondike was named chairman of the fight promotion committee. His name was George Lewis Rickard—since known by his tag-name "Tex"—and from the Gans-Nelson fight Tex Rickard went on to promote the Johnson-Jeffries contest in Reno and then to his Madison Square Garden successes with Jack Dempsey. He promoted all of the major Dempsey fights during boxing's Golden Era. Rickard, whose Northern Saloon in Goldfield stood on the corner where Pete Moser now has his service station, was one of the most spectacular promoters in the history of professional sports. He had the magic touch in the art of ballyhoo. This was exemplified in Goldfield's gaudy 90-employee Northern Saloon, still a classic of its era.

The prize fight committee decided on a \$5000 purse (a considerable fight purse in those days), and feelers were sent to several boxers, one of whom was Oscar "Battling" Nelson, the "Durable Dane." Nelson was the leading contender for the lightweight championship, and his manager, Billy Nolan, was a shrewd opportunist. Rickard's offer interested Bill, and he came to Goldfield seeking an audi-

ence with the committee. One look at the rowdy wide-open town, and Billy knew there were big stakes to be gained here. He sold Tex Rickard and the committee a grand scheme: not a good \$5000 purse—but an unheard of \$30,000 prize! More than a fight between Nelson and some unknown mining camp fighter — how about a world's championship fight between Nelson and the recognized champ, Joe Gans? "You'll get what you pay for," argued Billy. "You want publicity for Goldfield—I'm offering you a chance to put this town on the map!"

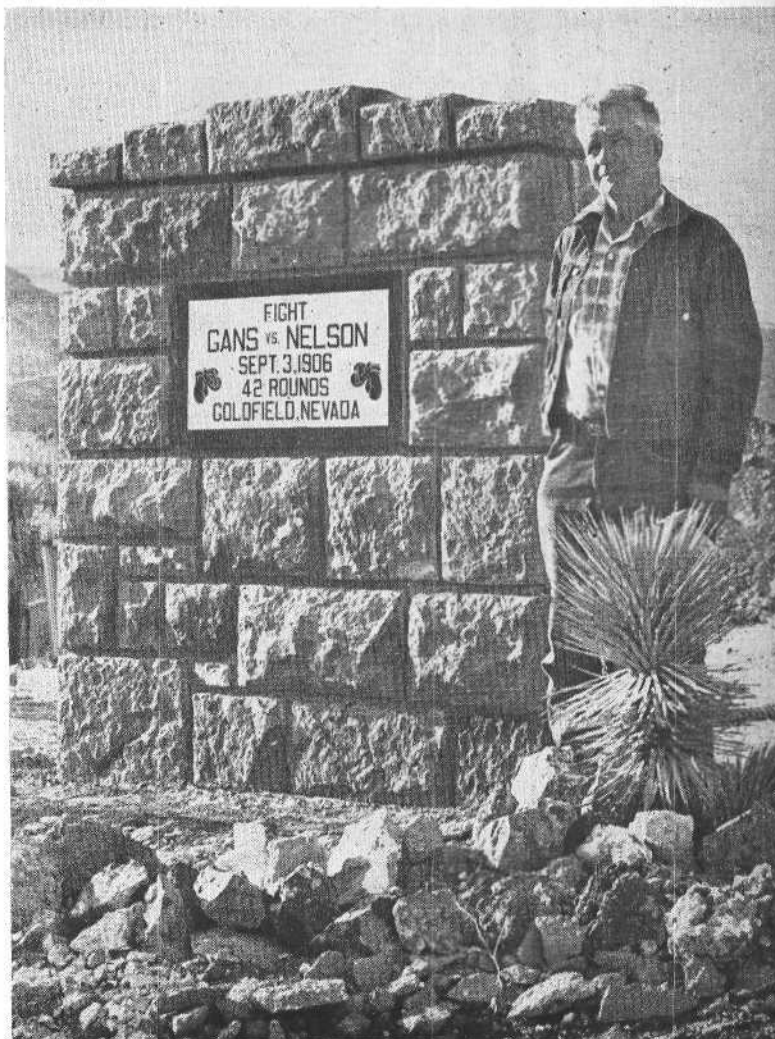
\$30,000 Purse

The committee agreed. It would be a \$30,000 fight. Fine, said Billy, now let me see the cash. The committee gathered an impressive mound of \$20 gold pieces and placed it on public display.

Billy demanded a two-third guarantee for his fighter—\$20,000. The committee agreed. Billy then asked for and received an additional \$2500 "for signing the contract," and \$500 to cover Nelson's training expenses. The champion, Joe Gans—a great fighter but a poor businessman—was offered \$10,000 plus \$1000 for expenses, probably the largest purse of his career. He was in financial trouble, and in no position to argue with the Bat Nelson camp. Gans accepted.

But, Nelson's manager-promoter wasn't through with his demands. He insisted on a 133 pound weight limit (Gans had been fighting at 140), and three weigh-ins in full

PETE MOSER AND THE GANS-NELSON MONUMENT. LOCAL CITIZENS HOPE MEMORIAL WILL CREATE INTEREST IN TOWN—A GOAL SIMILAR TO THAT OF '06 FIGHT PROMOTERS.



ring dress on the day of the fight—at 12-noon, at 1:30 and at ringtime, 3 p.m. This meant—as it turned out—that Gans, in order to make the weight, had to shave all the hair off his body, throw away his stockings, substitute thin strings for shoe laces, and go without food or liquid for 24 hours prior to the fight. As his last demand, Nelson's manager demanded a small boxing ring, which was an advantage for his slow-footed fighter.

Meanwhile, Tex Rickard was having his own headaches. It cost his committee \$10,000 to build a wooden stadium capable of seating 8000 fight fans. The State of Nevada, looking for a slice, demanded a \$1000 license fee. Programs had to be printed, tickets sold (\$25 for ringside, scaled down to \$5 general admission), ring officials secured, and battalions of refreshment vendors and special police hired. As the big day approached, the fight cost pushed the \$60,000 mark.

Excitement generated by the contest swept the Southwest mining towns. Goldfield was dressed in specially-ordered bunting. Saloon patrons upped their intake. Music and shouting and laughter drifted to the dark encircling desert hills to blend with the desert songs of the coyote pack. Two hundred pullman cars steamed into town, filled with boxing fans in a holiday mood. Outlying mines were abandoned. Dust from wagons, men on horses, and one-lunger autos converging on Goldfield tinted the sunset the night before the fight.

Goldfield's "On the Map"

Bets were made, doubled and tripled on street corners. Rumors of bribes accepted and rejected spread through seething Goldfield like wildfire. The stock exchanges were doing a roaring business—so many men were knotted in front of these establishments that the sidewalks and streets were jammed. The investors had heard of Goldfield. Money was pouring into town.

Sedate Brittie Caynor, who came to Goldfield in 1905 and who still lives there, is hardly a fight fan, but her

memories of the electric excitement of September 3, 1906, were razor-sharp when I questioned her about her memories of the Gans-Nelson fight.

"The town was for Gans because Nelson was so boastful," she recalls. "Gans took the humble part. My father and I didn't go down to see the fight; we went to look over the new-fangled autos parked near the stadium. The crowd was real noisy, and the fight was quite a bit along when we got to the area. They were letting people in for a dollar, so we went in. It was dreadful! I couldn't stand to see much of it. Nelson was a dirty fighter. Everyone was screaming at him."

Tommy Remembers

Troubadour Tommy Thompson (*Desert*, Feb. '59) of Rhyolite, Nevada, remembers the fight as if it took place a few hours ago. "The town went wild! Absolutely wild!" he told me. "The boys nearly tore the wooden stadium apart. It was the roughest fight ever. There'll never be another like it."

The contestants had agreed—in preliminary arrangements—on a fight to the finish. Gans, who was 32 years old, was more experienced than the brash, brilliant 24-year-old Nelson. The clever Negro boxer outfought Nelson in the early rounds of the fight; he scored a knockdown in the 15th round. In the 17th, Nelson's youthful stamina began wearing on Gans; in the 23rd round it appeared as if Gans would lose. But he held on. By the 30th round, Gans gamely took over. In the 32nd (some authorities say the 27th round), Gans broke his hand, but this anatomical problem was imperceptible against his tiring and clumsy target.

In the late rounds, the 35th or 37th, the fight sank to a bloody back-alley brawl. Bat Nelson, desperate, was butting, mauling and kicking his opponent. In the 42nd round, Nelson drove his right hand into Gans' groin with all his remaining strength. Gans fell to the canvas, writhing in pain.

The rough crowd was on its feet, hysterical.

The referee did not hesitate in giving the fight to Gans. Even the Nelson supporters in the ebullient crowd did not

A 20-MULE SUPPLY TEAM LEAVING GOLD-FIELD, ABOUT 1903. IN BACKGROUND IS AREA LANDMARK: COLUMBIA MOUNTAIN.



dispute the decision. There was angry, but unorganized talk of riding Nelson and Billy Nolan out of town. Tempers cooled. Justice had triumphed! The miners rejoiced, and celebration and expert report of the thousands of blows delivered in the fight continued far into the night.

For Gans, this was the highlight of his career. Suffering from tuberculosis, which claimed his life four years later, he lost his title two years later to his Goldfield opponent, Bat Nelson. Nelson died in 1954 at the age of 71. He made \$300,000 in the prize ring, but reportedly lost it in ill-advised real estate promotions. At his death he worked in the parcel post division of the Chicago Post Office.

Tex Rickard's gamble paid off. The fight grossed nearly \$70,000, returning a profit of \$10,000 to the promoters, it put Goldfield on the map, and it gave Tex ideas!

The Goldfield flower reached its peak of bloom on that September day in 1906. Labor troubles, a rash of high-

grading, police raids on the highgraders and crooked assayers, the woes of the gold market, a flash flood in 1913 which did serious damage to Goldfield, and then the 1923 fire which destroyed upwards of 50 blocks in the heart of town—these things beat Goldfield down for the count.

There still is a wealth of ghost buildings to be explored in Goldfield today. The spring-to-fall climate is magnificent. The wash in which Gans and Nelson fought, and down which the main flood roared in 1913, is a treasure field of purple glass and ghost town litter. Hundreds of miles of mine tunnels honeycomb the Goldfield plain. The boys still work their claims, hoping that the price of gold will be raised by the government; or that someone with capital and an inexpensive recovery process will start the wheels turning in the old camp.

The referee is standing over Goldfield. He's counting six . . . seven . . . eight . . . nine . . .

Reader Response

Out of the Sand . . .

Desert:

"Stuck in the Sand" (April) was an interesting article. With 50 years of desert driving experience, I can add a few suggestions:

Have your traveling companions stand on the rear bumper and bounce up and down in unison; alternating lift and push will help extricate the car—and it is easier and more effective than straight pushing.

Another trick is to add weight to the car's rear end with rocks or sand. This is especially useful in trying to free a stuck pick-up.

Hub caps make good shovels for anyone silly enough to go out without proper equipment.

Novice drivers of four-wheel-drive rigs should learn the technique of handling this type of vehicle before they go out into rough country. Four-wheel drive handles considerably different than conventional drive.

WALT JOHNSON
Las Cruces, New Mexico

Cabin Contractor's Code . . .

Desert:

We acquired a five-acre jackrabbit homestead near Twentynine Palms, and then had a cabin built on it by a contractor who specializes in this type of work.

Six months later, the cement block floor went to pieces. There were cracks in it four inches wide! Even when we confronted the contractor with proof that the cement was of inferior quality and that it had not been poured properly, he refused to make the necessary repairs.

Several of our neighbors also have been taken. We could bear our losses much easier if this letter serves to warn others who are planning to have a contractor build their cabins. Investigate the builder, and read the fine print before you sign the contract.

MARGARET COBINE
Santa Ana, California

Field Trips Missing . . .

Desert:

We're more than a little disappointed in the last two editions of *Desert Magazine*: there have been no field trips. We're rock-hounds so you can see that Indians, poetry and desert characters hold small interest for us.

Is your magazine going to publish field trips? If not, we will have to let our subscription lapse.

MRS. CLAUDE D. HUIZING
Los Angeles

(On the contrary, we are emphasizing the field trip aspect of the gem and mineral hobby. See "Reports from the Field" in January and February issues; "Gem Banks on the Shores of Lake Mead" in March; "Touring Mexico for Minerals" in April; and "Carnelian and Roses at Ash Hill" and "Reports from the Field" in May.—Ed.)



ELIZABETH BEHREUS IN HER GARDEN.

A Tin Garden . . .

Desert:

I was born in Bakersfield, but have lived on the Mojave Desert off and on since July, 1911. My hobby now is my rock and tin garden (see photo). I have collected over 100 old coffee pots, over 100 old tea kettles, tea pots, old lanterns, and so many various other things. Folks come from all over the country to see my garden.

My husband and I have kind of taken care of a small cemetery out here in our area. It is right south of Benson Gulch. Evidently the graves have been there for years. Only the Good Lord knows who

these people were. It's kind of sad. We have tried and tried to find out all the information we could in regard to this lost cemetery, but so far have had no luck. My husband, Julius, fixed some white crosses for the graves. After all, they have been someone's folks. I feel like we have done a good Christian act by taking care of this cemetery.

ELIZABETH BEHREUS
Goler Heights via
Randsburg, Calif.

Please: No Architecture! . . .

Desert:

Why change *Desert Magazine*? I read where your publisher wants to put architecture features in the magazine. Why in Heaven's name do you want to add something new to an already good publication?

J. ARENDS
Seattle, Washington

(We're not adding anything new. In *Desert Magazine's* very first issue—Nov. '37—we carried an architecture feature on an attractive sandstone home in Niland, Calif. Since then many desert home features have appeared in this magazine.—Ed.)

Desert's in His Blood . . .

Desert:

There must be times when you wonder just how much your subscribers in the Midwest know about the desert area—whether they buy *Desert Magazine* from curiosity or whether they have had a taste of the Southwest and want to know more. Or, perhaps, they are dreamers and armchair travelers.

Without doubt you have all of these types—and then you have poor folks like me who make a living here, but wish they were in the desertland. That's the reason why we have vacationed in the desert nine out of the last 12 years.

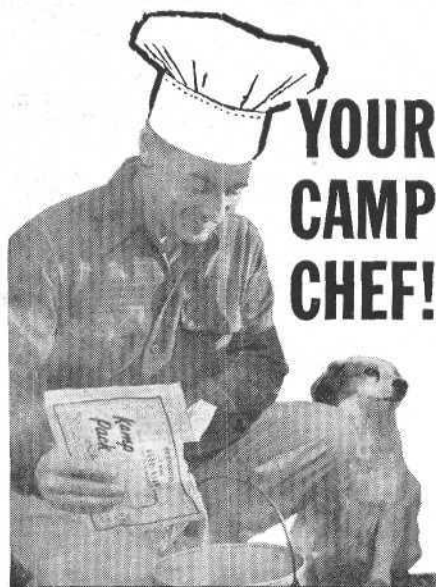
Little did we suspect, when we bought our first copy of *Desert Magazine* in October, 1945, that it would change our outlook on life. We haven't missed an issue since.

LOWELL FIELD
Mattoon, Illinois

The Crimson Lily . . .

Desert:

On the May back cover there appears a clump of Mariposa lilies that are pure crimson in color. I am not familiar with the Mariposa lilies as they grow in the lower and warmer desert regions, but I am familiar with those that grow on the des-



YOUR CAMP CHEF!

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KAMP-PACK
CONCENTRATED FOODS
For hikers, fishermen, campers!

It's quick to cook... it's light to pack
...it tastes terrific! For example...

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Menu No. 3

...one of 7 delicious daily diets available in 4-man and 8-man envelopes.

BREAKFAST

Ginger Buttermilk Griddle Cakes
Maple Syrup
Hot Chocolate

LUNCH

Spanish Rice with Creole Flavor
Hot Biscuits Fruit Punch

DINNER

Cream of Chicken Soup
Camper's Stew
Banana Pudding
Chocolate Milk Shake

Supplementaries:

Miracle sponge and detergent, vegetable shortening, salt, hard candies and toilet tissues.

Moisture-proof, light-weight packaging. No refrigeration required. Meats packed in our own U. S. Govt. inspected plant! Select from 120 items!

MAIL COUPON TO NEAREST PLANT

Bernard Food Industries, Inc., Dept. DM
217 N. Jefferson St., Chicago 6, Illinois
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Please send me complete information and price list for KAMP-PACK foods.

Name _____

Address _____

City _____ State _____

erts of Colorado and Utah at altitudes up to 5000 feet, and in the 7000-foot foothills.

I have never seen a crimson Mariposa lily. Most are white, many are lavender or purple. In the higher altitudes they have blue centers. Could it be that your photo engraver missed the mark with his crimson lilies?

ELAM B. UNDERHILL
Grand Junction, Colorado

(In "Desert Wild Flowers," Edmund Jaeger describes the Desert Mariposa as "flame-color or brilliant vermillion . . . When the flower is viewed closely, the contrast between the clear vermillion of the petals, the blackish-red patches below, and the purplish anthers provides an added charm. The black, hairy gland on each petal is ringed about by vermillion."
—Ed.)

The Way of L.A. . . .

Desert:

The growing demand for housing on the desert bothers me. Los Angeles was once classified as desert land—and look at it now! If the real estate people are allowed to keep up their present activities—no matter how much room you have on the desert—you might as well change the name of your magazine to: *The Desert that Used to Be*.

How long will your fresh air remain fresh? With homes come factories and with factories come smoke and gases and cars and traffic problems.

If we want wilderness lands for our children to enjoy, something had better be done about it now.

T. C. PETERS
Los Angeles

(Something can be done about it: support legislation which seeks to create and maintain wilderness areas.—Ed.)

Military Real Estate . . .

Desert:

I was appalled to learn of the Armed Services' great land holdings in the Southwest. Make no mistake: these vast tracts are doomed forever, for it is impossible to safely reactivate a firing range after the military uses it.

The services should coordinate their activities and jointly use the minimum amount of land needed for their tests. To hell with admirals and generals who must dominate or destroy our great desert homelands just to retain their service independence.

DR. WALDO H. JONES
Myrtle Beach, South Carolina

Lost Dutch Oven Mine . . .

Desert:

I am very interested in lost mines—especially the Lost Dutch Oven Mine in the Clipper Mountains near Essex, Calif. I would like to get in touch with any of your readers familiar with this country who are seriously interested in accompanying me on a search for the mine.

VERNON A. ANDERSON
3021 Spring St.
Paso Robles, Calif.

Color Makes a Hit . . .

Desert:

I have been a subscriber to your interesting magazine since 1946, and want to congratulate you on the addition of color illustrations on the back and inside covers of the recent issues.

W. B. SAMPSON
Stockton, Calif.



Bill Hoy photo

Your Latest Invitation

Come see and photograph beautiful, gentle and colorful GLEN CANYON of the River Colorado.

MAY AND JUNE, 1959

With publication of this issue of DESERT, there remain but FIVE available GLEN CANYON boating trips of the original Nine.

These are the dates:

MAY 21, 22, 23; 29, 30.
JUNE 4, 5, 6; 18, 19, 20;
and 26, 27.

Launchings at HITE, Utah.

Landings at Crossing of the Fathers, on the very trail where on Nov. 7, 1776, Padres Dominguez and Escalante crossed at El Vado.

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BOOKS of the SOUTHWEST

Books reviewed on this page are selected as being worthy of your consideration. They can be purchased by mail from Desert Magazine Book Shop, Palm Desert, California. Please add four percent sales tax on orders to be sent to California. Write for complete catalog of Southwestern books.

WHEN CONFEDERATES NEARLY CAPTURED THE SOUTHWEST

In 1861 the slave state of Texas seceded from the Union and became the 7th state to join the Southern Confederacy. Immediately the Texans began making plans to carry the rebellion into the territories of New Mexico and Arizona where many among the sparse population were known to be Southern sympathizers.

In the months that followed the Confederate troops from their base at El Paso, came very close to conquering the vast areas of New Mexico and Arizona. Mesilla, Albuquerque and Santa Fe fell to the troopers from Texas, and for a brief period Tucson was under the Confederate flag.

In Washington it was realized that the loss of the Southwest would be a serious blow to the Union, and Colonel John Slough with loyal Unionists from Kansas and Colorado were ordered to march West and recover the lost territory while Colonel J. H. Carleton was organizing a similar expedition in California.

Strangely, the civil war as fought in New Mexico and Arizona has been almost overlooked by historians, until recently when Robert Lee Kerby, for his master's degree at Notre Dame University, prepared an exhaustive thesis which is now available in a

book *The Confederate Invasion of New Mexico and Arizona*. Kerby, now a lieutenant in the Air Force, spent many months in the dusty archives at Washington, and the Southern libraries piecing together the story. He has done a very thorough task in research, fully documented. It is a book all students of western history will appreciate.

Published by Western Lore Press, Los Angeles. 159 pp with bibliography, appendix and index. Illustrated. \$7.50.

JOHN DUNN BIOGRAPHY IS LIGHT, EASY READING

For those who enjoy rambling reminiscences of cowboy and gambler days in the Southwest, Max Evans' *Long John Dunn of Taos* makes fit reading.

There's plenty of spice in the biography of John Dunn, who was born in Texas in 1857. He wandered the West as a ranch hand, gambler, miner and cowpoke before settling down in the Taos country as a freighter and stagecoach operator.

Dunn, according to Evans, was fast with tongue or gun. He gambled to win and took every advantage he could to see that he won. He stole when he had to, which seemed to be pretty often; killed a few times; and did other things that a young fast-tempered man on the loose had to do to stay alive

in the kind of wild western world John Dunn enjoyed.

The last third of the 174-page book tells of Dunn's mature days in Taos, where he became one of the town's outstanding citizens.

Long John's story makes light and easy reading, and won't produce literary indigestion. It won't make the best seller lists either, but still it is the sort of yarn that you'll enjoy handing to a friend after you've finished with it.

Published by Westernlore Press of Los Angeles, the book contains 12 halftone photos. It sells for \$5.75, complete with one of the most attractive dust jackets of the year.

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SOUTHWEST NEWS BRIEFS

Little Dell Dam Approved . . .

Salt Lake City—The U.S. Corps of Engineers has recommended construction of a \$6 million Little Dell earth-fill dam and reservoir on Dell Creek in Parleys Canyon. The reservoir, upstream from the Mt. Dell Reservoir, would have a gross storage capacity of 8000 acre-feet.

State Taxes Trailer Homes . . .

Santa Fe—New Mexico's Motor Vehicle Division said its drive to license the state's trailer homes is proving successful. The month-long campaign was launched after officials estimated only 1300 of the 30,000 mobile homes in New Mexico were registered. Under the law, all trailers except those on permanent foundations must be registered and licensed with the Motor Vehicle Division. Those on permanent foundations must be registered with the county tax assessor and are subject to the ad valorem tax.

Hopis to Make U.N. Appeal . . .

Hotevilla, Ariz.—Hopi traditionalists, who want to pursue the age-old Hopi way of life, have voted to make a rather startling departure from the past: they will take their land dispute with the Navajo Indians to the United Nations in New York. The traditionalists are at odds with their own Hopi Tribal Council because the Council is not claiming enough of the disputed boundary land. The Navajo reservation completely encircles the Hopi "island."

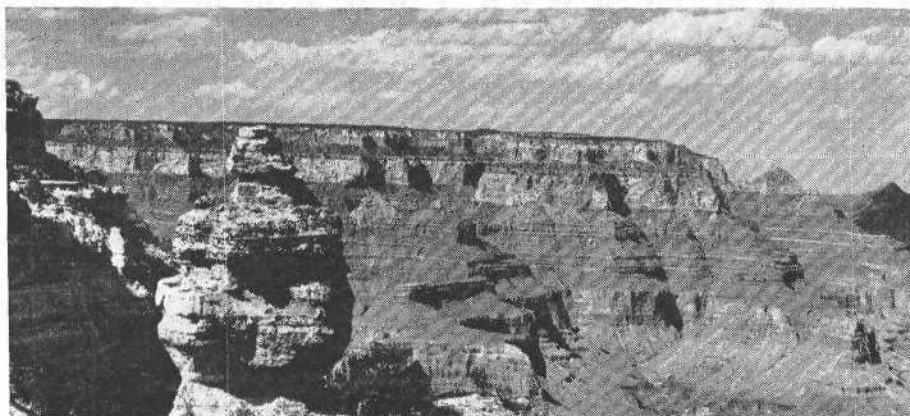
More River Recreation . . .

Needles, Calif. — The Bureau of Indian Affairs approved plans for the leasing of 2000 acres of Fort Mojave Indian Tribal land for recreational purposes. The tract is on the Colorado River north of Needles. A San Bernardino County official said persons interested in leasing the land for recreational development will be contacted, and if the program appears feasible, bids may be called on various projects. Meanwhile, the Department of Interior and county officials plan to work out details for a marina along the river near the Topock railroad crossing south of Needles. The 140-acre site is in the Lake Havasu Refuge of the U. S. Fish and Wildlife Service.

Indian School Closed . . .

Fort Defiance, Ariz. — Fire safety hazards have closed the 500-pupil school at Fort Defiance on the Navajo Reservation, the Bureau of Indian Affairs announced. The students at Fort Defiance are enrolled in grades from the beginners through the fourth. Practically all are Navajo Indian children. The dormitories found unsafe for further occupancy are 50 years old.

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Interstate Route Proposed . . .

Phoenix—A research and consultant firm has made a controversial recommendation that an interstate highway be constructed from Phoenix almost directly west toward California to the vicinity of Brenda on U.S. 60-70. The new route would bypass tourist-minded Wickenburg and other communities north of Phoenix. The report was prepared for the State Highway Department and the U.S. Bureau of Public Roads. The latter agency already has approved the recommendation. The Brenda-to-Phoenix route would save motorists about 25 miles.

Bighorn Sheep Count . . .

Las Vegas, Nev.—The Nevada Fish and Game Department conducted its second annual Toiyabe Mountains bighorn survey, and this year's count was 23 sheep spotted by the four men who took part in the project. In 1958, 46 sheep were counted. Nearly all of the ewes seen during this year's survey had yearling lambs with them which indicates the production of the animals was good last year.

Indians Call Convention . . .

Phoenix — Five hundred Indians from throughout the country will meet in Phoenix December 7-11 when the National Congress of American Indians holds its annual convention at the Hotel Westward Ho. The last time this organization met in Phoenix was in 1953 when it elected Joseph R. Garry of Plummer, Idaho, its president. He still holds the post.

Joshua Road Under Fire . . .

Indio, Calif. — Riverside County's improvement of a jeep-trail up Berdoo Canyon to link the Coachella Valley with the southern boundary of Joshua Tree National Monument was termed "damaging to the integrity of the Monument and all national parks and monuments in our nation." The attack came from Richard Fleming, chairman of the conservational committee of the Sierra Club's Riverside chapter. County officials ordered the trail improved after the National Parks Service turned down plans for a "direct link" between the two desert areas.

Self-Government Is Goal . . .

Parker, Ariz.—The Colorado River Indian Tribes has asked Congress to pass legislation that would give the Indians a more direct hand in their own affairs. The proposed measure would allow the tribesmen to set up a corporation to handle reservation resources, mainly water.

GOOD LUCK IN HUNTING WAS PETROGLYPHS' PURPOSE

Reno—Dr. Robert F. Heizer, University of California anthropology professor, claims he has found the clue that may explain a long-standing riddle of archeology: the meaning and function of primitive designs chipped into rock surfaces by prehistoric American Indians (*Desert*, May '59, p8).

After extensive field work in western Nevada, Dr. Heizer discovered that the ancient rock carvings of that area are associated in almost every case with deer trails. His findings strongly indicate that the petroglyphs were a type of primitive magic used to insure good hunting in the area. The carvings are located in places where hunters would be likely to wait to get good shots at deer, such as entrances to canyons or narrow constrictions in canyons and passes through the mountains.

Dr. Heizer does not believe petroglyphs were idle doodlings, as some authorities claim, for the Nevada Indians of the past had little time to do anything not directly connected with the production of food and shelter.

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Hard Rock Shorty of Death Valley



"Muskeetas?" asked Hard Rock Shorty. "We had 'em bad jest onces here in Death Valley. An' I don't want to see 'em like thet ever agin."

A bugology student from the University had opened the conversation when he innocently asked Hard Rock if the mosquitoes in Death Valley were easy to find for the collector's net.

"Look," said Shorty, looking across the desert vista, "I never knew what muskeetas wuz 'til th' spring of '18. We'd had lots of rainfall—durn near a record thet winter—an' for the first time in memory th' waterholes herabouts wuz all filled up."

"At th' same time we wuz havin' all this flood here in th' desert, over on the Sacramento side of the Sierras they had 'em a real drouth. Well, the muskeetas just took advantage of us. They left the San Joaquin Valley and sailed right over Sonora Pass an' laid their eggs in th' waterholes here in Death Valley. Th' Paiutes told me they'd never seen anythin' like it before."

"Th' muskeeta wigglers hatched out in record time in this desert sun. You see, th' daddys and mommys of them skeeter eggs wuz used to th' 'Frisco fog. When their young 'uns blossomed in this Death Valley sunshine they jest went outa hand."

The University boy nodded in knowing agreement. "How big were they?" he asked.

"Never really measured one with a yard-stick," Hard Rock replied. "But up in Wildrose Canyon I saw one o' th' early hatches try to swallow a burro."

The student exclaimed, "Why, that's just not possible!"

"Yor sure right, son," Shorty told him. "This here young skeeter died of a broken neck when the burro kicked while he wuz bein' swallowed."

"An' when this special hatch o' Death Valley skeeters finally grew up in late April they wuz a real menace," Hard Rock recalled. "They got so ornery at

night thet when it wuz time to sleep I had to move into one o' them old iron steam boilers thet the Borax Company had left behind. Wuz the only place I could sleep with any safety."

"'Bout th' third or fourth night I wuz in there these skeeters found where I wuz sleepin', an' dagnabit if they didn't start aborin' in through the sides of th' steel-plate boiler lookin' fer me! Only thing to do wuz to wait 'til one of 'em would drill through, then I'd bend his probe over with the heel of my boot."

"No fooling?" asked the bugology boy, in disbelief.

"No time fer foolin'," replied Shorty, gazing into the yonder. "I wuz in complete control 'til about eight or nine of 'em skeeters drilled through th' side of thet boiler. I had 'em all bent over an' pinned down neat as could be."

"Th' angry buzzin' outside th' boiler should o' warned me what wuz comin' next. Man, them skeeters wuz mad!"

The bugboy looked at Hard Rock Shorty intently. "What happened next?"

"Dad-burn it, if those muskeetas didn't lift thet boiler with me inside into the air and start flyin' downhill toward Badwater."

"No!" the student exclaimed.

"Yep," Hard Rock affirmed.

"An' it wuz a rough ride. Those skeeters wasn't tuned in with each other and their vibrations wuz all mixed up. We'd dip this way, then that. I'll tell you, thet boiler wuz really swayin' back an' forth as we flew down past Furnace Crick."

"Were you scared?" the bugologist asked.

"Bet I wuz scared," Hard Rock answered. "But I decided I'd sorta take over as engineer on this trip. So I straightened out them bent beaks one at a time, an' shoved 'em outside the boiler. I worked this way 'til I wuz down to two skeeters, one on each side. You know, we settled down to earth so gentle. It wuz th' prettiest landin' you ever saw."



MINES AND MINING

Los Angeles . . .

Franz Pick, a noted currency authority, estimates that as much as \$300,000,000 may be stashed away in the form of gold by Americans. A few of these people are stacking their dollars away in the form of gold coins while others are paying well-qualified specialists in Mexico, Canada and other countries to do their bullion and coin stacking for them. Gold is being held like any other commodity—with the hope that the price will go up so that the supplies can be sold at a profit. While the price increase in gold is not impossible, the United States is firmly committed to maintaining a world price of \$35 a fine ounce and any price change is highly unlikely, Pick said.

Carson City, Nevada . . .

Nevada's mining industry outlook—for many months on the gloomy side—shows some signs of improvement, State Mine Inspector Mervin J. Gallagher indicated. He predicted employment and production in 1959 would top the previous year's totals. Gallagher said there was new activity

in gold mining, an increasing demand for non-metallics and a stabilization in the copper market. Lincoln, Eureka and Humboldt counties still are hard hit by the '58 slump, but Mineral and White Pine counties are regaining lost ground. About 4400 Nevada residents presently are employed by the mining industry, compared to 4150 in July, 1958. State record for mining employment came in 1944 with 11,425 workers. During the Depression the total mining work force dropped to 2750.

Austin, Nevada . . .

The White Caps Gold Mining Corporation recently acquired the promising Lowboy uranium claims from William Wilson and Glenn Woods. The *Tonopah Times-Bonanza* said the

claims already have yielded the most spectacular showing of uranium ore in Nevada. White Caps ore will be processed by the Vitro Uranium Corporation of Salt Lake City.



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TRUE OR FALSE ANSWERS

Questions are on page 20

1. False.
2. False. The Mojave runs underground for much of its length.
3. True.
4. False. Muir was a great naturalist.
5. True.
6. False. Ichthyosaur was king of the ancient Triassic Sea.
7. True.
8. False. Many snakes use the looping method of locomotion to move through deep sand.
9. False. Krutch is a naturalist-philosopher.
10. False. Sedona is a delightful resort town.
11. True.
12. False. Opuntia is a cactus.
13. True.
14. False. Corn was the Pueblos' food staple.
15. False. The Papago Women do all of the harvesting and fruit preservation work.
16. True. When the Army of the West left Ft. Leavenworth, Kansas Territory, it numbered 1658 officers and men.
17. False. The water ouzel is a small bird that lives near water and feeds on insects.
18. True.
19. True.
20. False. Petrified wood is stone.

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A word of warning before you become overly enthusiastic about collecting these beautiful specimens: the antiquities laws are very specific on the subject. The federal government allows individuals to collect Indian artifacts *on the surface* of the ground in national forests. No permits are needed. Under no circumstances should you dig for artifacts on public land. You may end up paying a \$500 fine or spending 90 days in jail. The various Southwestern states protect their lands in similar manners.

If you are or become an avid artifact collector, cooperate with archeologists connected with federal or state agencies, or state universities. After you know these people and they know you, the relationship is bound to be mutually beneficial. Most of them are always happy to "talk shop." For help in classifying your artifacts, call on the curator of a museum near your home.

Over 7000 Americans are owners of sizable Indian relic collections ranging in value from a few dollars to over \$400,000—and they steadily increase in worth because artifacts are becoming scarcer while the demand for these relics rises. It is a fast growing hobby, and the rising price of artifacts on the open market has caused a brisk trade in machine manufactured arrowheads. Some of these fakes are so well done even advanced collectors are fooled. But there are many reputable dealers, and the beginner will not lack for arrowhead sources.

Prices fluctuate according to availability, rarity and the law of supply and demand. I recently paid these prices for samples of various arrowheads: broken, 5c; fair, 10c; good, 15c; fine, 25c; very fine, 35c; extra fine, 50c; selected, 75c; large selected, \$1. A white fine warpoint was purchased for 35c, and a white fair spearhead, 15c.

Small arrowheads (birdpoints) of good quality are worth between 25c and 35c. The prices quoted above are for arrowheads made from dull slate (one was made of sandstone).

Most all collectors agree that the two basic arrowhead designs are *leaf* (oval) and *triangle*. However, there are countless variations in these designs (see accompanying chart) and sometimes collectors become snarled in their names for the more common designs. But remember: arrowheads were made by individuals—not machines; and the basic raw materials varied considerably. No two rocks were conducive to exactly the same exterior designs. Arrowheads were flaked by hand with bone awl tools or other

percussion instruments of stone or wood. Some Indians preheated the stones before working on them.

Arrowheads (also known as projectile points and darts) are classified both by shape and ingredients from which they were fashioned. This latter method is best if you have a large collection from various parts of the nation and world. The aborigines had to use materials available to them for their arrowheads, hand tools, utensils, weapons and ornaments. In the deserts of Arizona and Southern California, the Ancients used jaspers, agates and obsidians which flake and fracture with relative ease, thus allowing the stone worker an opportunity to create designs rather than hunt for rocks that were shaped just right. Scattered throughout the Southwest are arrowhead "factory sites"—locales where the ground

The ARROWHEAD Hobby

By JORDAN E. DETZER

is covered with stone chippings and broken or rejected implements. The Indians made regular trips to these sites for much the same reason that rockhounds make repeat visits to certain areas: the rock collecting is good.

Arrowheads from the Midwest usually were made from slate and other dull-colored stone. But Indians—like the modern arrowhead collector—traded with their neighbors, and frequently raw material for arrowheads was a leading commodity.

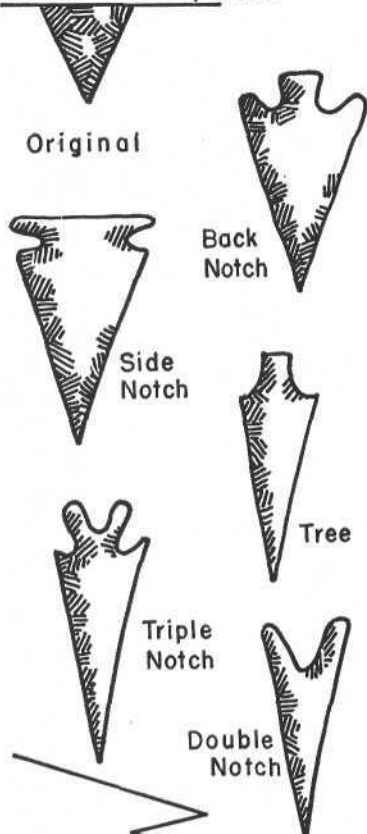
After awhile, the collector should be able to pinpoint the origin of certain arrowheads, for there is much variety within the basic material families. Obsidian, for instance, is not all black. Some desert areas produce red obsidian, others blue, still others produce stones of a distinct multi-colored pattern.

The Indian hunters made a variety of arrowheads—each designed to do a specific job. The *birdpoint* was a very small arrowhead ranging from a quarter-inch to an inch or more in length. There were many birdpoint shapes, and collectors usually use their own lingo to describe them. My sons and I have this code: a "long-thin" birdpoint is just that—very long for a birdpoint (up to three inches) and very thin, with barbs on both sides. Usually this type of point has a half-inch base which tapers to pin point sharpness at the striking edge. The "turkey tail" birdpoint has a wide flaring butt end designed to fit a larger and heavier shaft. The "Christmas tree" is triangular; its butt end is short and square, taking a smaller shaft.

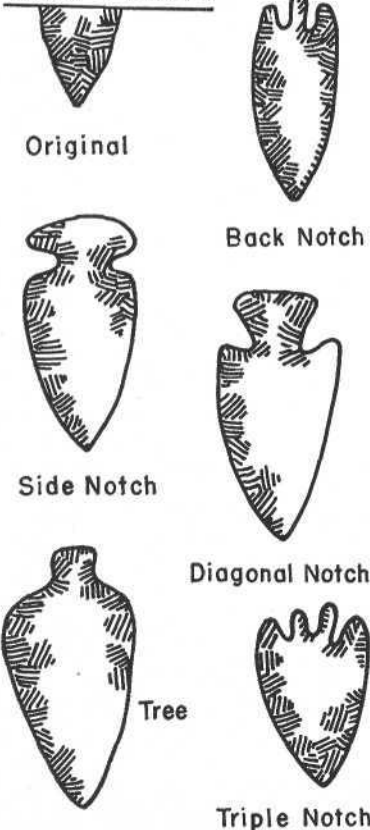
The larger arrowheads (two to four inches in length and considerably thicker than the birdpoints) are called "spearpoints" or "spear heads." They have large butt ends for bigger shafts or poles. The arrows were attached to these shafts with tar or pitch and then bound with animal tendons or fiber strings.

Larger stones which show flaking and a general arrowhead shape, sometimes used as hand tools, we call "clunkers." These are unfinished arrowheads, and the beginning collector should not bother with them. When you find a clunker, leave it. Let it encourage you to find a perfect arrowhead with fine flaking and notched butt end.

TRIANGLE points



LEAF POINTS



Private and professional exhibits of arrowheads vary from single display show cases with the points arranged in neat designs, to collections of points pressed into special frames and hung on the wall. Frequently, rockhound stores have frames already made up for mounting stones or arrowheads.

It is well to catalog your arrowheads as to Indian tribal group, locale, material, shape and value. You may know these things about each of your points when your collection is small, but as the number of arrowheads you own grows, the facts concerning them may be lost.

American Indians have left us a rich heritage. From their weapon points we can tell whether they were hunters or raiders, what materials they made their implements from, and how far they had to travel to obtain such stones. Arrowheads do not bow to age or weather—and neither will the hobby of collecting arrowheads perish if you respect the law and the rights of private property owners.—END

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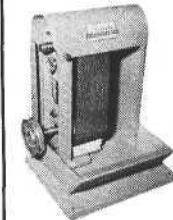


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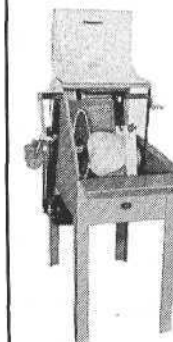
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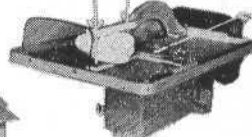
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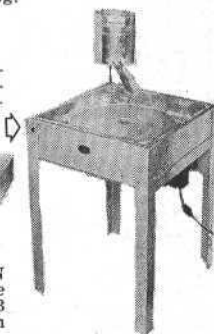


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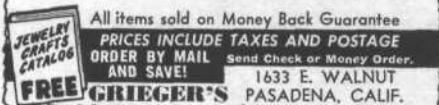
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By Dr. H. C. DAKE, Editor of The Mineralogist

Desert Sands

Color of desert sands vary from locality to locality because of differences in mineral constituents. Reddish sands usually are stained with the ferric form of iron—hydrated or ferrous irons create many beautiful and blended shades of yellows and browns.

Collecting and studying sands from the far corners of the world is a new and growing hobby. All the hobbyist needs by way of equipment is one of the new low-priced binocular microscopes on the market. An excellent catalog is available free of charge by writing to the Unitron Company, 204 Milk Street, Boston 9, Mass. Request Catalog 44Q.

Only low-power binoculars (10X to 30X) are needed for sand study. With such instruments it is possible to easily identify most or all of the components in desert and beach sands.

Under the lens, each sand grain stands out with remarkable clarity. Wave action tends to concentrate the heavier sands, and this is true to a limited extent with desert sands altered by wind action—but where wear has not been extensive, the observer can instantly identify each particle from crystal form alone. Color also provides clues.

The binoculars have other practical uses in sand study. Important mineral discoveries have been made with low-power binoculars — for example, the discovery of grains of scheelite in sands.

Black Jade

Outside of the Orient, black jade is not highly regarded, and its real rarity is hardly appreciated here. As a matter of fact black jade happens to be one of the real rare types of jade, found only sparingly at all localities in the world—outside of Wyoming.

When we speak of black jade we do not include the nearly black, the type having more or less admixed green, and which appears black in large masses. To qualify as black jade the material should be totally opaque, hard and compact, and of an absolutely jet black color. Very little black jade has been found in the Orient, even over a period of centuries.

Black jade is found in the Wyoming jade fields in limited amounts, and not in great profusion, but is of very fine quality, equal to the best found anywhere in the world. And yet this Wyoming material is not at all as appreciated as it should be. In the Orient this material easily would bring 10 times as much as it does here. Black Wyoming jade is offered from time to time at astoundingly low prices; it should be snapped up on sight.

Diamond Cutting

Often some reader asks for information regarding facet cutting of diamond. The technique is fairly well known, and has been described in various books on gemology. The details of speeds, types of laps to use, and other required information generally is not given in these general references, however.

Diamond cutting is something the amateur had best not attempt. In the first place,

from where would gem quality rough diamonds be available? Would the syndicates that control the world prices of diamonds release quantities of rough gem quality diamonds in a free-handed manner to sources and markets not within their control?

Moreover, diamond cutting may be regarded as a technique all its own, requiring special skill and a long apprenticeship under skilled guidance. Special equipment also is required. The home gem cutter has plenty of gem materials to work on other than diamond. We may as well forget about diamond cutting.

Smallest Tumbler

At an exhibit sponsored by the Mount Hood Gem and Mineral Club of Gresham, Oregon, I was pleasantly surprised to see what a small club can accomplish. The many individual exhibits were outstanding in many ways, and the exhibit as a whole was superior to some I have seen by large city clubs.

I was especially taken by what is presumably the world's smallest gem tumbler. This unique exhibit was arranged and operated by R. J. Odne, pioneer gem cutter of Portland, Oregon, and Vancouver, Washington.

This smallest tumbler is made from a 12 ounce glass pickle jar. The cylindrical jar rests in a horizontal position on two small rollers, about the size of pencils. The motive power is a small phonograph motor. Transmission of power is done with small rubber bands. According to Odne, this gadget works.

The glass container enables one to see just how a gem tumbler works. I was of the opinion that the grits would soon abrade and "frost" the inside of the glass container, but Odne said this does not happen. The container we saw in operation had been in continuous operation for more than a month, and there was no visible abrasion.

Aside from the question of practical utility, a glass container is certainly useful for study purposes.

Luminous Watches

A good deal is being written about the possible hazards of radiation fallout from nuclear explosions. Little thought has been given to the innocent-appearing luminous dials on wrist watches and alarm clocks.

J. L. Haybittle has presented some interesting findings. Ordinarily the amount of radium in the average wrist watch dial is harmless enough, but according to Haybittle, there are exceptions.

The average wrist watch increases the natural background radiation by only one percent. It is revealed that the average wrist watch, with luminous dial, contains about 0.25 microcuries of radium. But measurements on some show amounts as great as 2.2 microcuries, and a few even 10 times as great.

Assuming that a watch carrying 2.2 was worn 16 hours per day, the skin would receive 0.9 roentgen per week. This is nearly two-thirds of the present maximum permissible level for exposure to limited parts of the body.

GEMS and MINERALS

REPORTS FROM THE FIELD

These notes are intended as suggestions for your collecting trips. Always make local inquiry before following trails into uninhabited areas. Mail your recent information on collecting areas (new fields, status changes, roads, etc.) that you want to share with other hobbyists, to "Field Reports," Desert Magazine, Palm Desert, California.

Promising Summer Field Trip . . .

Jean, Nev.—An impressive list of minerals have been collected by rockhounds in the Goodsprings area, the Mineral Society of Southern California (Pasadena) disclosed. Goodsprings is 7.4 miles northwest of Jean. It is the center of a once active mining area. Material found at Goodsprings includes smithsonite, hemimorphite, hydrozincite, galena, cerussite, anglesite, mimetite, malachite, azurite, chrysocolla, aurichalcite, linarite, stibnite, jarosite, caldonite, cinnabar, cuprodesclousite, calcite, wulfenite, aragonite, and orthoclase feldspar twins. Elevation of Goodsprings (4000 feet) makes it a good summer field trip prospect.

Cadys Provide Rich Harvest . . .

Ludlow, Calif.—Ventura rockhounds had a field day collecting minerals in the Cady Mountains north of Ludlow. They report finding jaspagite, green seam agate and quartz crystals. The road into the Cadys, they said, was rough in places. These mountains are highly mineralized, but this is no place to hunt for minerals in the summer. All camps are dry. For firewood, rockhounds have been burning the abandoned ties of the Tonopah & Tidewater Railroad.

Crystal Hill Is Popular . . .

Quartzsite, Ariz.—Quartz crystals, wulfenite crystals, limonite, fluorescent geodes and nodules are some of the materials collected by hobbyists this past spring at Crystal Hill. The collecting field is reached by driving 6.9 miles down the El Paso Gas Company's service road from the Quartzsite to Yuma highway. The turnoff is about six miles below Quartzsite. Trailers can be taken to the campsites at the base of Crystal Hill.

Rockhunt on a Reservoir . . .

San Jose, Calif.—Members of the San Jose society took to their boats to bring home specimens from the shores of the Anderson Dam reservoir. Reported their bulletin: "This was the first time a bunch of pirates dug up the treasure instead of burying it." The "treasure" consisted of howlite, blue agate nodules, and marcasite in chalcedony.

Sagenite at Owl Hole Springs . . .

Baker, Calif.—Members of the Burbank, Calif., Rockcrafters found "plenty of sagenite—red, white, brown and mixed colors" at the Owl Hole Springs collecting area near Baker. One of the members of the club uncovered a vein of nodules above the campground. The road into the area passes over several steep grades and cars pulling trailers had difficulty.

Mojave Desert "Gem Hill" Open . . .

Rosamond, Calif.—Rohr Rockhounds report the Gem Hill area northwest of Rosamond is open to mineral collectors. There are some active uranium claims in the area, but they are not on collecting sites. Here are directions to the field: traveling north on U.S. 6 to Rosamond, turn left (west) on the Willow Springs Road at the north limits of Rosamond. Three-and-a-half miles down the Willow Springs road turn right (north) on the Mojave-Tropico Road. Keep to paved road for 4.6 miles, then turn left (west) onto a dirt road. This road makes a loop of the Rosamond Hills ("Gem Hill") and ends back on the Mojave-Tropico Road. From it several trails lead short distances into the hills. Materials collected here include brown petrified wood with ash coating, palm root, green opal, green jasper, tan agate and agate-filled nodules. This is open desert and there is no water or firewood. Supplies can be purchased at Rosamond. Cars pulling trailers will have no difficulty reaching campsites near the diggings. The rockhound should bring digging equipment, but there is plenty of float.

Abandoned Copper Mine . . .

Apple Valley, Calif.—Copper-stained feldspar and some pyrite specimens were collected at an abandoned copper mine near the Dead Man's Point dry lake by members of the Bear Gulch Rock Club. The rockhounds also reported success at an old gold mine north of Lucerne Valley in this same Mojave Desert vicinity. They found what was described as orbicular rhyolite—little round pellets of agate in a matrix that looks like rhyolite, creating small radiating eyes in its gray or red matrix—at the gold diggings.

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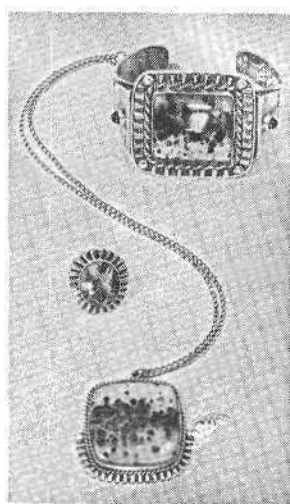
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CALIFORNIA FEDERATION PLANS 20TH GEM SHOW

San Mateo, Calif.—All the rockhound roads in the West will lead to San Mateo in June, for it's California Federation convention and show time, and this year's affair will mark the big show's 20th anniversary. The show dates are June 26, 27 and 28.

Show visitors will have an opportunity to participate in a field trip to an unworked gem area. Three post-convention trips also are planned, including a visit to Garnet Hill near Jackson. Gem and Mineral Society of San Mateo County members, who are convention-show hosts, will lead the field trips.

In addition to a large number of competitive and non-competitive exhibits, the show committee has lined-up an unusually fine array of special exhibits. These include the unique Jade Clock constructed by members of the San Francisco Society; a 1300 pound Monterey nephrite boulder; the largest and most extensive display of fossils ever shown at a Federation show; and two gold collections from the Mother Lode area never before displayed publicly.

THE *Desert* MAGAZINE CLOSE-UPS

In early March a small party of Nevadans planned a citizen's arrest of the leader of an illegal wild horse roundup in the Spanish Springs area northeast of Reno. Apparently the horse hunters were tipped-off, for the citizens found no evidence of a roundup that day.

"It was just as well," wrote Beverly Walter, a member of the would-be law enforcers and author of "Wild Horse Annie fights to save the mustang" in this month's *Desert Magazine*. "I was plenty frightened."

Mrs. Walter lives in Verdi, Nevada. Her husband is also a free-lance writer.

* * *

Margaret Stovall ("Red Mountain's 'Official Greeter'") is a Southern California newspaperwoman with a great deal of feature writing experience. "In fact," she writes, "the young staffers refer to me as the 'old pro', and I accept it as a compliment until confronted by a mirror."

Mrs. Stovall and her husband, Jack, a salesman, make many trips into the desert regions. Their cameras are standard equipment on these outings, and it may be that the coming months will see more of their work in these pages.

HIGHLAND PARK

THE LAPIDARY'S STANDARD OF VALUE

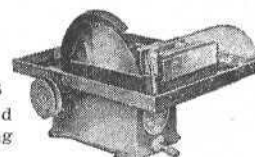
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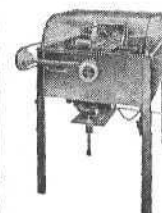
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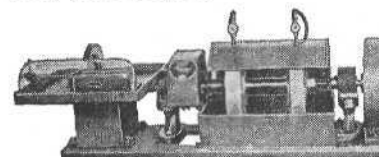
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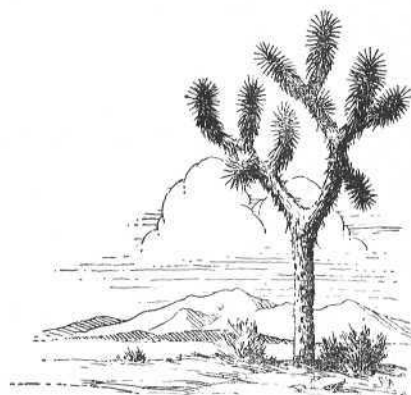
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By RANDALL HENDERSON

OVER THE RADIO comes the commercial announcement that you and I may now travel from San Francisco to New York in a non-stop jet-propelled plane in four and three-quarter hours. I have no doubt many millions of dollars have been invested in the perfection of this new high-speed aerial vehicle.

But why? Why is so much speed essential, or even important? What is the gain in terms of health, security and knowledge—in values that really are important to you and me—in being able to soar through the atmosphere at 600 miles an hour?

We should be proud, perhaps, of the technical skill of the fellow humans who have developed this wondrous piece of machinery. But isn't it possible that the same investment of time and materials might have yielded a much greater return in human progress in other fields? The money and natural resources invested in one of those great super-planes would have built several school houses. Within a few years those planes will become obsolete. But the knowledge and understanding acquired in the school houses would be paying compound interest in human happiness, passed along from generation to generation, for all the ages to come. In our idolatrous worship of the golden calf of speed haven't we passed the point of no return?

At a highway intersection near my home this week seven persons were killed in a collision in which one of the cars was traveling 90 miles an hour. Last year the highway death toll in the United States was 38,000—and excessive speed was one of the main contributing factors. The mental hospitals and cemeteries are crowded with the victims of nervous and heart ailments brought on by the pressures of an ever accelerating demand for speed. Millions are out of work because of the increasing speed and efficiency of the tools of production. I am afraid relaxation and meditation are becoming lost arts because, paradoxically, more speed is creating less time for those things.

In the top of the fig tree outside my window a mockingbird is singing its morning serenade—prettier music to me than ever comes over my radio. Yet in flight the mockingbird is slow and rather awkward. That uncivilized little creature has never aspired to compete with the linnets and sparrows in the grace and speed of their flight. And neither of them can sing worth a darn. The mockingbird is quite content to pour out a morning song of beauty and happiness. And I envy, and thank heaven for the mockingbird.

* * *

Among the desert tribesmen there are none for whom I have greater respect than the Hopis who somehow eke out a living in one of the most arid sectors of the American desert. It is generally assumed that they chose the barren mesas of northern Arizona for their homes because

those lands are so fruitless no other tribesmen would ever covet them.

For the Hopis are a people of peace. So averse are they to conflict that in the period of long ago when war-like Apaches, Utes and Navajos were raiding their granaries, the People of the Mesas induced a colony of Tewa Indians to move in from the Rio Grande Valley and build their homes at the head of the trail where they would stand guard against the marauders. As proof of their prowess as guardsmen the Tewas kept a score board to record their killings—one mark for each victim. The incised lines in the stone face may be seen today where it is known as Tally Rock.

According to the Hopi legend of origin, their people came originally from the interior of the earth, and so sacred do these tribesmen regard their ancestral home that they employ Navajo Indians to take out the coal they use from a nearby mine in Keams Canyon.

Strange superstition perhaps, but the Hopis have faith in their gods, and that is important. We must remember that nearly all religions have legends of origin, and these date back to a period long before there were scientists to delve into the true facts of origin and evolution.

* * *

One evening recently my grandson and I broiled our hamburgers over a little fire of blazing deadwood, spread our sleeping bags on the sand, and then joined the circle where nearly 100 members of the Sierra Club were gathered around a huge campfire for song and story.

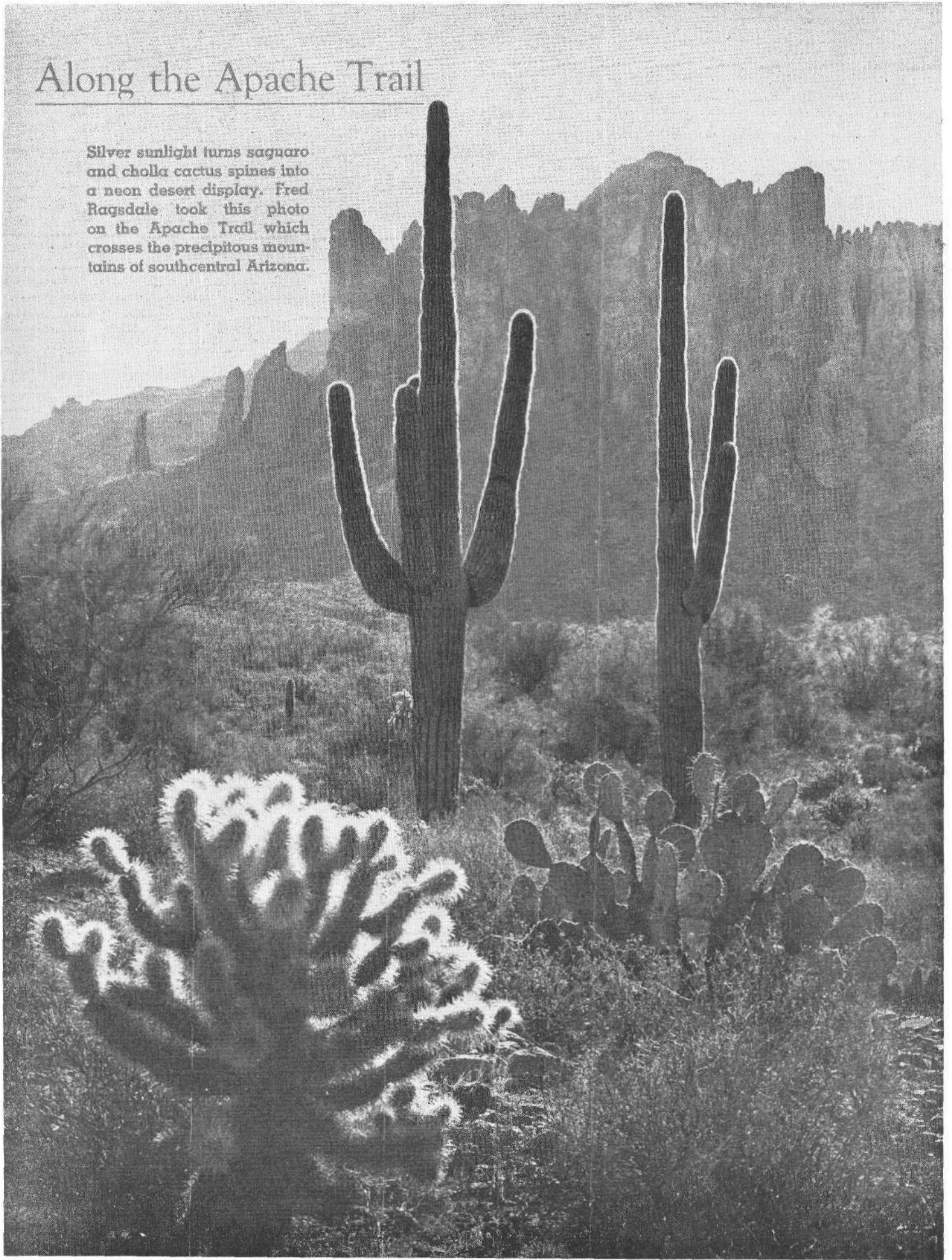
On this outing over a third of those in the fireside circle were children. Youngsters almost without exception love camping, and I wish more parents realized the character-building value of this kind of recreation. I am sure that if statistics were available they would reveal that the percentage of delinquency is very low among teen-agers who have found the adventure for which all youth hunger, on camping and exploring trips with their parents.

Some of today's campers think they need a station wagon loaded with gear—tents, cots, stoves, chairs, tables and even refrigerators. Paradoxically, for the sake of a bit of ease they assume a lot of camp chores which take much of the fun out of the camping trips. Instead of a carefree outing it becomes a tedious job of unpacking a miscellany of furniture and hardware—and then stowing it back in an overloaded car again.

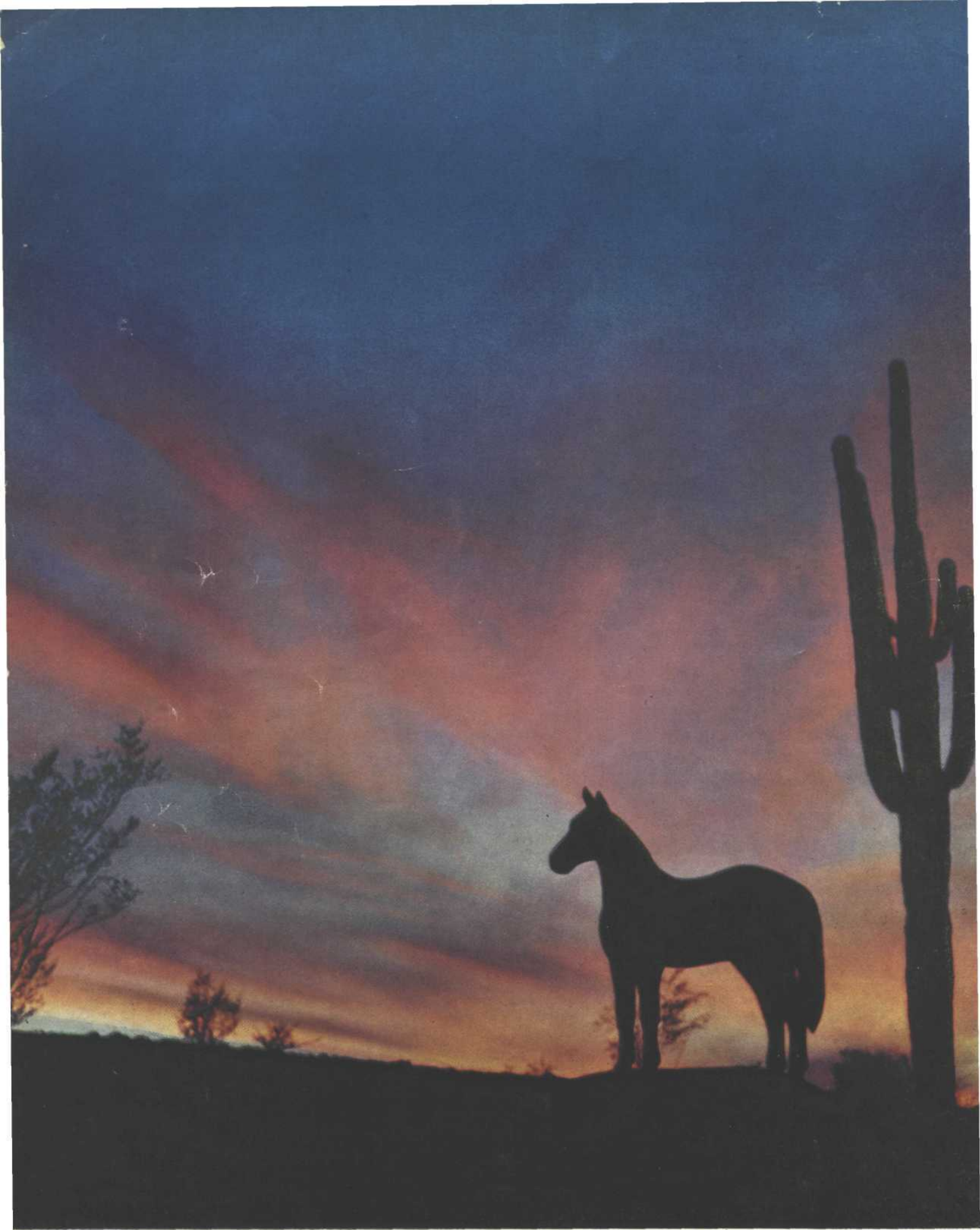
Most of the Sierrans are old-fashioned campers. They have made only three concessions to modern luxury: gas burners, light folding chairs and air mattresses. I should note a few exceptions among the old-timers. Alice Bates, in her 'sixties, still rolls her sleeping bag on the ground *sans* mattress, and a few of us still think the grub tastes better when cooked over a little wood blaze between two rocks.

Along the Apache Trail

Silver sunlight turns saguaro and cholla cactus spines into a neon desert display. Fred Ragsdale took this photo on the Apache Trail which crosses the precipitous mountains of southcentral Arizona.



— PHOTO OF THE MONTH —



Wild Stallion

Who can forget the thrill of sighting a wild horse? And when you add a brilliant desert sunset for background, then the scene becomes even more deeply etched in your mind. Robert Payne took this photograph on the Horseshoe Dam road 30 miles north of his home town of Phoenix.